MATERIALS TESTING &

IN-PLACE **NUCLEAR DENSITY** TEST REPORT

INEFLITRA

PROJECT:

7]	INSPECTION,	INC.
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99005 C

DATE:	5-26.	99		. Inspe	CTOR: <u>)2</u>	EANJ BI	RD
CLIENT:	INJE !			Cont	ractor: 1	ナニハノメ	
PERMIT:				WEAT	HER:	05 80°	· · · · · · · · · · · · · · · · · · ·
96 Compection	Required:	95	Soils: <u>536.</u>	7. Aspha	ik:	Nuks Gau	#19
Test Number	Wet Density	Pounds Moisture	Percent Meisture	Dry Density	Maximum Density	Optimum Moisture	Percent Compection
19.	126.6	6.6	5,2	120,0	123.6	9,4	97
Location:	i		DE 65-1				PTH
20	128.3	ł	7.9	118.1	123.6		95.5
Location:			F) P)= 45				
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				B.//:\ ~//	1000		
Location:		f	<u> </u>		l <u></u> 1		
Location:							<i>'</i> .
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		TEST # 1	≥
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		#5	Z
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L	 		

7857 #7 9790 TE55# 14 - 9670 TEST" 9 THE THE . 96.670 タグス 「日ン厂出18 7557 H 20 . 95% - 95.5% TEST # 19 • 1770 WARM WASTE POND 57 工艺广片 - 9676 . 96% • 95.8 TEST#5 . 95% - 977 • 9870 7557 #L • 100% FOR SAND GAME ON LY THIS IS NAT A FAILIYUL TEST

	VIATERIALS FESTING &	WORK MAY PROCEED SUBJECT TO INCORPORATION OF COMMENTS B REVISE AND RESUBINIT WORK MAY PROCEED SUBJECT TO-INCORPORATION OF CHANGES INDICATED TEST REPORT
II I	NSPECTION, INC.	WORK MAY NOT PROCEED
FILE#:	1=99005C	D REVIEW NOT REQUIRED PROJECT: R. O INCEPT I FRA
DATE:	5-27-99	5-7304449.01-093 CONTRACT NO INSPECTOR: D. BIRD
CLIENT:	INEEL	BY Constitution Copies PHENIX
PERMIT:		DATE WEATHER: HOT 80
% Compactio	n Required: 95%	Soils: 5362 Asphalt: Nuke Gauge: <u>40.7</u>

Test	Wet.	Pounds 45	Percent	Dry Density	Maximum.	Optimum	Percent
# 1	7 71,25		8.3		123,6	9,4	91,2
Location:	35° W.	0F E 518			10 41	ンドアナリー	BELOW
SINDCONE	GRAIT/=	<u>م</u> ريب		557		184	
172	130.X	=9,6 = <u> </u>	£7.33	=120,6-	123,6	<i>2974-200</i>	年7/5-こ
Location:	35 W = 0	FE 51	7E 75	5, 0, 1/1,	END	ספייף	
	SH-SPET	्य ४०व	DE 5	Th 3	1236	9.4	949
# 3 Location:	128.3 FO' 1	11.0 دئنزنجر 5 شرہ		<u>・ ナアカン</u> いったテヤー		DE 4)	C 1-2-2-7
Location.		رومرومرو دی مشاملات		10,20	<u></u>		
¥4=-	129-6	训护等	2874 <u>-</u>	#T18.6	123.6	9,42	± 95,9≡
Location:	3517/7	7520	7 3 L	WOFE	500	y"=02=7	DEMAN
		2000 63					
45	128:2	10.0		118.2	123,6	9,4	75,0
Location:	50' N 0		P 60' 4	ير شره , ر	SIDE 4	ול בין און)
775		DW GR		#77 0 T	报为数量	. 721 F	97万
Location:	30 5 6	三》个赞	73428		是专协会	941 P.D.	776
	والمناسيح ومناسية	Town 7	The same				
NT.	132.)	11:6	8.7	720.5	12356-	9.2	91,4
Location:	Ka' =	0)= W. 5	105 30	1 5, 05	MENI	> 4" D	<u>۱۳ ۳۳ سر</u>
	一)'BELL	GRA	75		Action to the second second	The Print Children	- No.
70	129.X	11072年	4/3				
Location:							
50.9	129/	1/7	85	= 1180	7723,6	9.4	95-4
Location:	50-4		-101= 60	E. A.		الارد - ي	OF PTH
	- ターアルカ	WEXA	DE	-1755-1	+12 <u>2</u>	(,	i - f = v y F ny

MATERIALS TESTING & MARIA WASJE POND TEST REPORT

INSPECTION, INC.

IN-PLACE NUCLEAR DENSITY

File#:	E77005 -	PROJECT:	INCELTRA
DATE	5-27-99	INSPECTOR:	D. BIRP
CLIENT:	Iniel	CONTRACTOR:	PHENIX
PERMIT:		WEATHER:	1+0,5800
% Compaction	Required: 93% Soils: 5362	Asphalt:	Nuke Gauge: #17
Test Number	Wets Pounds Percent. Density Moisture Moisture	Density Maximu	Optimum Percent 3
11	128.1 11.1 8.5	117.0)23.	91 9.4 94.6
Location:	35' NOF5. 51DE 50'		
(-3 BEZON GRADE A	ALL TESTS W	IARM WASTE POND
# //=	727.2= 7.0 = =7.0	-178, 2 -123,	9 -9 4 - 95.6
Location	FD WOF 5.5175 6	0 N.OF 3.5	
	TIP DECAME GRAVE		
K12 -	1300 10.1 7.7	=119:9 123.	9 9.4 91.0
Location:	40 W. OF F 51DE 45	1 5, OF N. E	HITHER "HE GUE
	-4 BELOW GRADE	17	. 8
¥)3 ₹	136-9-11-55-28:43	119.9 123.9	13 74 7 970
Location:	35 E OF WASTOF T	1 5,01-N	ライフミーゲールデル
	H-BELOW GREBE		
	129.8 11.2 860		
Location:	35 E 07 W. 510= 47	3.01-N.51DE	411 DEPTH -41
-	BELOW GRADE -		Fear
方文基础	127.6 9.3 3 26.6	11/2/1 4/23/5	1 21 4 3 276 3 5
ocation:	は多くころというのアミニクタ	STOF N.S	IDE TUDE TOLETON
	PEREZOUS GRADE		
416	128.50 9.5 7.3	119.0 123.6	9.4 96
ocation:	35' F. DF W. SIDE #	15.01=N.51DI	للرافع تيان الراب ي
ANT BUTTON	4) FEZOW GRADE	7/ ==	
1) 23 5 2	月7、空間水道到2世間	120,9 3123,6	清智斗章 392%
ocation:	了。本下的大型。 第一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个	040 02 57.57	SEPTH SEPTH
	THE WEST SELECTION		
9/2	134:1 13,9 = 10.3	120,2 322	8 9.4 97
ocation:	35 F- OF W. SIDE : 35'	N/ 472 5. 5117	13 4" WITH
	-D' BELLOW ERABLE	# # " ===	Tape of the state of

E LE

MATERIALS

IN-PLACE NUCLEAR DENSITY TEST REPORT

TESTING & WARM WHSTE POWN TEST REPORT INSPECTION, INC.

File#:	- 17005	-		_ PROJE	CT:	INEEL	<u>. </u>	
DATE:	5-27	99		Inspe	CTOR:	D. BIRD	ka sa	
CLIENT:	INJEE			CONT	RACTOR:	PHENIX		
PERMIT:	٠.			WEAT	HER:	HOF 83	- 0	
% Compaction	Required: 2	570	Soils: 536	Aspha	ult:	Nuke C	iauge: #17	
Test 2	Wet Density	Pounds Moisture	Percent	Dry Density Co.	Maximum Density	n Optimum Moisture	Percent Compaction	
#19	129.9	11.3	8,6	118.6	123.4		95,9]
Location:	20' N.O.	75. 51I	7- 3-91	ינא בנט :	SINE	איי DE ויץ	7+ 9].
	-2) /71	=20W-61	RADIET			e de la companya de l	, All the second second]
かって	728,6	10.6	50.23E	到的。	FF136	5 E9.9	753	
Location:	3517072	رعيتري	05 23 /	THOF	2:5101	(学り) カモ)	77.4	
		Low-G	PADE					
		3 60 2 3 4	2 - 2 - X-			45		
Location:			<u> </u>		<u>.</u>			ŀ
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Location:								
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Location:								j- <u>-</u>
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	friends and annual trans							
Location:								
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Table 1. All Assay 1.		And in the second state of			The state of the s			
Location:	AND THE			to the state of		-	A STATE OF THE STA	
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TEST = 13 155146 7557 47 TEST#14 725 J H & TESTAS SAND CONE TEST 16 TESTES MEST # 11 TEST = 17 . TESTHY 7555 H 19 . 90 1 97.2 6 97.7 11 95,6 16 96 2. 97.5 7 974 12 976 17 978 3 94.9 9 96.7 13 97.0 18 97.0 4 95.9 9 9579 14 95.9 19 95,9 5 956 10 44.6 15 960 20 95.4



SUBMITTAL NO.; S-7304449.01- 093			
Rev. /	PROJECT NO.: OU 2-13 TRA Remedial Action	SUBCONTRACT NO.: S- Phenix of	
SUBMITTAL DESCRIPTION:	<u> </u>	L	
	3" TEST REPORTS TYPE A SOIL C" TEST REPORTS TYPE A SOIL O"	The state of the s	/1/ 99
B	EVIEW AND COMMENT REQUES	ST FORM	
	X ES&H	OTHER -	
X CAM - CRAIG REESE	X CE - JODY LANDIS	OTHER -	
X QA - LEO HERBERT	OTHER -	☐ OTHER -	
IF COMMENTS ARE NOT RECEIVED OR NO CONT EVIDENCE THAT THE REVIEWER CONCURS WITH ENGINEER, EVEN IF NO COMMENTS ARE MADE. RETURN COMMENTS ARE MADE. RESPONSIBLE ENGINEER: Craig Reese	AND SUBMITTAL PACKAGE TO AT: MS/3954 TSB	는 그 이 아이를 하는 것을 하는데 생활을 갖고 됐다. 사람이 아이를 하는 것들을 하는데, 사람이 있었다.	
	DELUENT COLUMNIENTO AND DIODO	SOUTHORN	
	REVIEW COMMENTS AND DISPO	SITION	RECOMMENDED
LINE NUMBER	REVIEW COMMENTS AND DISPO RECOMMENDED DISPOSITION	DSITION LINE NUMBER	RECOMMENDED DISPOSITION
LINE NUMBER A	RECOMMENDED		RECOMMENDED DISPOSITION
	RECOMMENDED		RECOMMENDED DISPOSITION
LINE NUMBER A B	RECOMMENDED		RECOMMENDED DISPOSITION
LINE NUMBER A B	RECOMMENDED		RECOMMENDED DISPOSITION
LINE NUMBER A B	RECOMMENDED	LINE NUMBER	RECOMMENDED DISPOSITION
LINE NUMBER A B C REVIEWER:	RECOMMENDED DISPOSITION	LINE NUMBER	DISPOSITION DATE:
LINE NUMBER A B C	APPROVAL AUTHORITY DISPOS	LINE NUMBER	DISPOSITION DATE:

VEHIOR DATA TRANSHIDANG AND DISTOSLITOR REVINSE SIDE Solvential III. S-730444701-Folder TRA REHERIAL ACLICAL OU. 2-Solvential EHENIX OF LDAIO. THE Solvential Code. 99-02-94 Data of Sedendina 06-04-99 SEE PERTANCHON 35 E <u>:</u> (20) Subsantinetar Manatura Dr. Fri 114 (721 Comment Werk may proceed subfact to beneficially of comments noted Marrie Agret E = 22333 100 betau communica you do mademandered of traffice becomes west Cign plant 11----1,71 <u> 177</u> PARCOPIS TROMPERING SCIENCE, INC. = ر 13 م THE RESIDENT AVE, IT O. NOX 1075 Distribution Day Fred Wark may not proceed CAM VDS from Wark may proceed. <u>ē</u> 110 Mater Lafte, Make 83416 3954 4-02 ALD Decement Cantrol Į. Clear they may a mad Lawardad 7.- r 1141 (3.5.1)Ξ Pril Brother and required, 02200 I V Itul Hammath uc Leo Distribution \bigcirc then there 5-1 PITTINE Received (SMI) Ξ **«** B-335

J304449.0J

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114 Ξ 1-1-1 11... to beautionals any comment. 6-23-49 Bermant TEST RESULTS GRADATION TYPE A SOIL دائد سروه عام Colorallal Data Description (74) Signotura Ξ (28) I neterocolodina caediat of tha data hulicators and 123) 1 J Artifitimal Community Attached

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nvironmental Services

Geotechnical Engineering

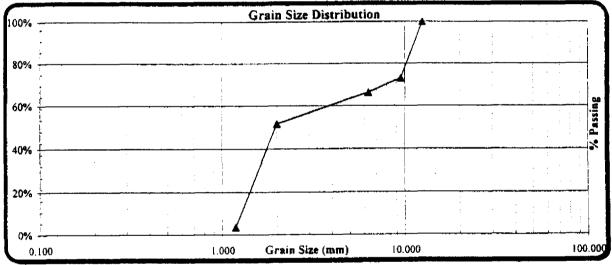
□ Construction Materials Testing

☐ Special Inspection

REVISION DATE JUNE 2, 1999

Sieve Analysis & Grain Size Distribution

Lance Peterson		Sieve	Sieve	Percent	
Phenix Construction		Size	Size	Passing	Specifications
P. O. Box 1626		mm	Inches		
Idaho Falis, ID 83403		12.5	1/2"	100%	
		9.5	3/8"	100%	
Project: IN	IEEL TRA	4.75	#4	81%	
Source: Ty	rpe A	2.36	#8	77%	
Sample ID: 53	96	2.00	#10	77%	
Date Received: M.	ay 17, 1999	1.180	#16	75%	
		0.600	#30	75%	
% Moisture: 10	.2	0.425	#40	73%	
Classification: M	L-CL	0.300	#50	66%	
Liquid Limit: 20		0.150	#100	52%	
Plastic Limit: 14		0.075	#200	3.6%	
Plastic Index: 5.	43				



Respectfully submitted,

MATERIALS TESTING & INSPECTION INC.

Lowell

Reviewed by: Lowell Trujillo Eastern Idaho Regional Manager

LT/klp

WORK MAY PROCEED SUBJECT TO INCORPORATION OF COMMENTS B REVISE AND REGULARIT WORK MAY PROCEED SUBJECT TO INCORPORATION OF CHANGES MOICATED C REVISE AND REQUENT WORK MAY NOT PROCEED D REVIEW NOT REQUIRED

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TC:\\$9 JC88\699065C\801L8\5409.00C

invironmental Services

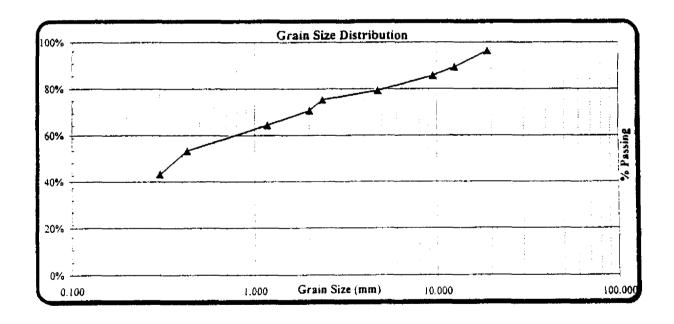
☐ Geotechnical Engineering

☐ Construction Materials Testing

Special Inspections

Sieve Analysis & Grain Size Distribution

Lance Peterson	Sieve	Sieve	Percent	
Phenix Construction	Size	Size	Passing	Specifications
P. O. Box 1626	mm	Inches	_	
Idaho Falls, ID 83403	37.5	1 1/2"	100%	
	25	l"	100%	
Project: INEEL TRA	19	3/4"	96%	
Source: Type A	12.5	1/2"	89%	
Sample ID: 5409	9.5	3/8"	86%	
Date Received: May 19, 1999	4.75	#4	79%	
	2.36	#8	75%	
Percent Moisture: 7.6%	2.00	#10	75%	
Liquid Limit: 18	1.180	#16	73%	
Plastic Limit: 16	0.600	#30	71%	
Plasticity Index: 3	0.425	#40	69%	
Classification: SM	0.300	#50	64%	
	0.150	#100	53%	
	0.075	#200	43.2%	



Respectfully submitted,

MATERIALS TESTING & INSPECTION INC.

viewed by: Lowell Trujillo

nern Idaho Regional Manager

LT/klp

B-337

MATERIALS INSPECTION

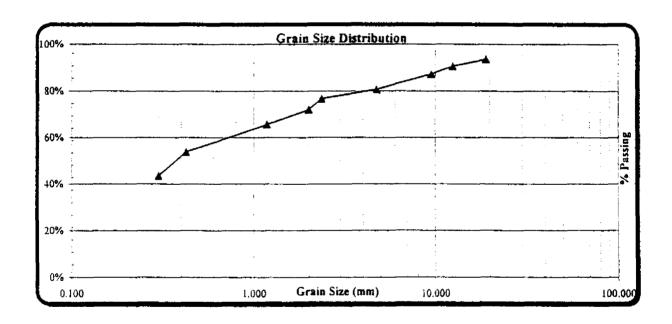
Environmental	Services	<u> </u>	Geotechnical	Engineerin

Construction Materials Testing

☐ Special Inspect

Sieve Analysis & Grain Size Distribution

Lance Peterson		Sieve	Sieve	Percent	
Phenix Construction		Size	Size	Passing	Specifications
P. O. Box 1626		mm	lnch e s		
Idaho Falls, ID 83403		37.5	1 1/2"	100%	
		25	1"	97%	
Project:	INEEL TRA	19	3/4"	94%	
Source:	Type A	12.5	1/2"	91%	
Sample ID:	5410	9.5	3/8"	87%	
Date Received:	May 19, 1999	4.75	#4	81%	
		2.36	#8	77%	
Percent Moisture:	7.5%	2.00	#10	76%	
Liquid Limit:	18	1.180	#16	75%	
Plastic Limit:	15	0.600	#30	72%	
Plasticity Index:	3	0.425	#40	70%	
Classification:	SM	0.300	#50	66%	
		0.150	#100	54%	
		0.075	#200	43.5%	



Respectfully submitted,

MATERIALS TESTING & INSPECTION INC.

Reviewed by: Lowell Trujillo

stern Idaho Regional Manager

Louell Drujillo

_____.klp

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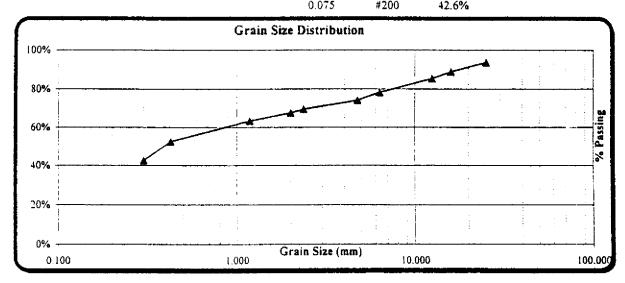


Construction Materials Testing

☐ Special Inspections

Sieve Analysis & Grain Size Distribution

Lance Peterson	Sieve	Sieve	Percent	
Phenix Construction	Size	Size	Passing	Specifications
P. O. Box 1626	mm	Inches	•	•
Idaho Falls, ID 83403	75	3"		
	50	2"	100%	
Date Received: May 19, 1999	37.5	1 1/2"	99%	
Sample ID: 5411	25	l"	97%	
Sample Location: Type A	19	3/4"	94%	
	12.5	1/2"	89%	
Percent Moisture: 7.6%	9.5	3/8"	85%	
Liquid Limit: 18	4.75	#4	78%	
Plastic Limit: 15	2.36	#8	74%	
Plasticity Index: 3	2.00	#10	74%	
Classification: SM	1.180	#16	72%	
	0.600	#30	70%	
	0.425	#40	68%	
	0.300	#50	63%	
	0.150	#100	53%	
	0.075	#200	42 6%	



Respectfully submitted,

MATERIALS TESTING & INSPECTION INC.

Reviewed by: Lowell Trujillo

Eastern Idaho Regional Manager



C:199 #0881E9900\$C\SO(LS\5412.00C

nvironmental Services

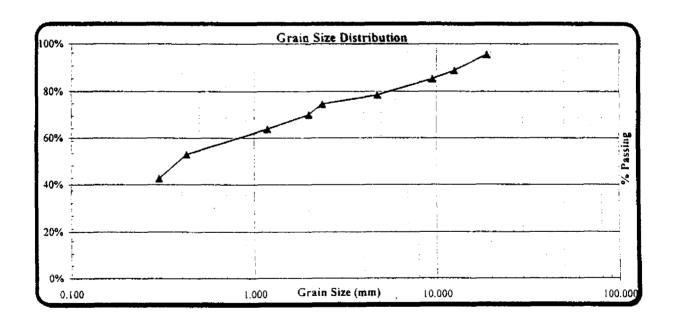
☐ Geotechnical Engineering

Construction Materials Testing

☐ Special Inspectio.

Sieve Analysis & Grain Size Distribution

Lance Peterson		Sieve	Sieve	Percent	
Phenix Construction		Size	Size	Passing	Specifications
P. O. Box 1626		mm	Inches	_	-
Idaho Falls, ID 83493		37.5	1 1/2"	100%	
		25	1"	. 99%	
Project;	INEEL TRA	19	3/4"	96%	
Source:	Type A	12.5	1/2"	89%	
Sample ID:	5412	9.5	3/8"	85%	
Date Received:	May 19, 1999	4.75	#4	79%	
		2,36	#5	75%	
Percent Moisture:	6.9%	2.00	#10	74%	
Liquid Limit:	17	1.180	#16	73%	
Plastic Limit:	16	0.600	#30	70%	
Plasticity Index:	1	0.425	#40	68%	
Classification:	SM	0.300	#50	64%	
		0.150	#100	53%	
		0.075	#200	42.6%	



Respectfully submitted,

MATERIALS TESTING & INSPECTION INC.

Peviewed by: Lowell Trujillo

em Idaho Regional Manager

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avironmental Services

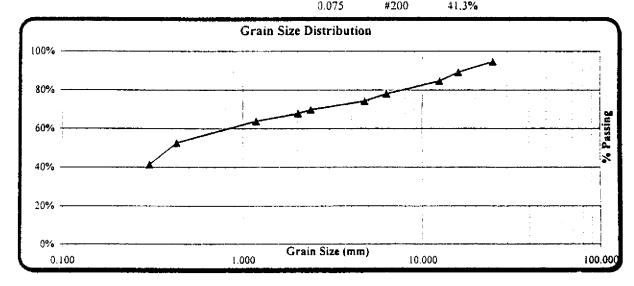
☐ Geotechnical Engineering

☐ Construction Materials Testing

Special Inspections

Sieve Analysis & Grain Size Distribution

Lance Peterson		Sieve	Sieve	Percent	
Phenix Construction		Size	Size	Passing	Specifications
P. O. Box 1626		mm	Inches		-
Idaho Falls, ID 83403		75	3"		
		50	2"	100%	
Date Received:	May 19, 1999	37.5	1 1/2"	99%	
Sample ID:	5413	25	1"	98%	
Sample Location:	Type A	19	3/4"	95%	
		12.5	1/2"	89%	
Percent Moisture:	7.9%	9.5	3/8"	85%	
Liquid Limit:	18	4.75	#4	78%	
Plastic Limit:	14	2.36	#8	74%	
Plasticity Index:	4	2.00	#10	74%	
Classification:	SM-SC	1.180	#16	72%	
		0.600	#30	70%	
		0.425	#40	68%	
		0.300	#50	64%	
		0.150	#100	53%	
		0.075	#200	41 3%	



Respectfully submitted,

Soull

MATERIALS TESTING & INSPECTION INC.

Reviewed by: Lowell Trujillo

Eastern Idaho Regional Manager

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Invironmental Services

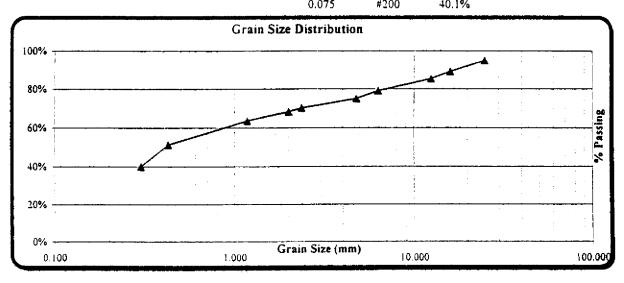
☐ Geotechnical Engineering

☐ Construction Materials Testing

Special Inspectio

Sieve Analysis & Grain Size Distribution

Lance Peterson	•	Sieve	Sieve	Percent	
Phenix Construction		Size	Size	Passing	Specifications
P. O. Box 1626		mm	Inches		-
Idaho Fails, ID 83403		75	3"		
		50	2 "	100%	
Date Received:	May 19, 1999	37.5	L 1/2"	100%	
Sample ID:	5414	25	1"	98%	
Sample Location:	Type A	19	3/4"	95%	
		12.5	1/2"	89%	
Percent Moisture:	7.9%	9.5	3/8"	85%	
Liquid Limit:	18	4.75	#4	79%	
Plastic Limit:	15	2.36	#8	75%	
Plasticity Index:	2	2.00	#10	74%	
Classification:	SM	1.180	#16	73%	
		0.600	#30	70%	
		0.425	#40	68%	
		0.300	#50	64%	
		0.150	#100	51%	
		0.075	#200	40.1%	



Respectfully submitted,

MATERIALS TESTING & INSPECTION INC.

Reviewed by: Lowell Trujillo

Eastern Idaho Regional Manager

Soull Frails

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hvironmental Services

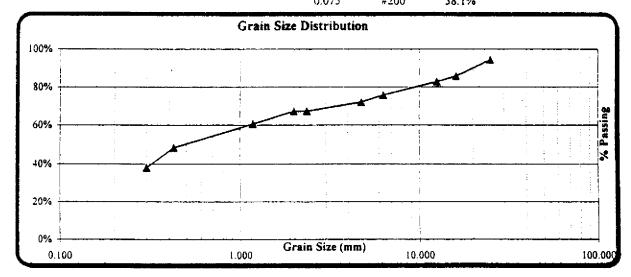
☐ Geotechnical Engineering

☐ Construction Materials Testing

Special Inspections

Sieve Analysis & Grain Size Distribution

Lance Peterson		Sieve	Sieve	Percent	
Phenix Construction		Size	Size	Passing	Specifications
P. O. Box 1626		mm	Inches	_	-
Idaho Fails, ID 83403		75	3"		
		50	2"	100%	
Date Received:	May 19, 1999	37.5	1 1/2"	98%	
Sample ID:	5415	25	1"	96%	
Sample Location:	Type A	19	3/4"	94%	
		12.5	1/2"	86% -	
Percent Moisture:	7.7%	9.5	3/8"	83%	
Liquid Limit:	17	4.75	#4	76%	
Plastic Limit:	16	2.36	#8	72%	
Plasticity Index:	1	2.00	#10	71%	
Classification:	SM	1.180	#16	70%	
		0.600	#30	67%	
		0.425	#40	67%	
		0.300	#50	61%	
		0.150	#100	49%	
		0.075	#200	38 1%	



Respectfully submitted,

Lowell

MATERIALS TESTING & INSPECTION INC.

Reviewed by: Lowell Trujillo

Sastern Idaho Regional Manager

1230 N. Skyline Drive, Ste. C, Idano Falls, ID 83402



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ivironmental Services

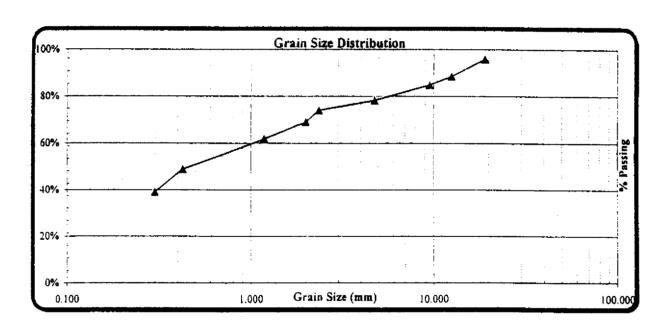
Geotechnical Engineering

☐ Construction Materials Testing

Special Inspection.

Sieve Analysis & Grain Size Distribution

Lance Peterson	Sieve	Sieve	Percent	
Phenix Construction	Size	Size	Passing	Specifications
P. O. Box 1626	mm	Inches	_	•
Idaho Fails, ID 83403	37.5	1 1/2"	100%	
	25	1"	99%	
Project: INEEL TRA	19	3/4"	96%	
Source: Type A	12.5	1/2"	89%	
Sample ID: 5418	9.5	3/8"	85%	
Date Received: May 20, 1999	4.75	#4	78%	
	2.36	#8	74%	
Percent Moisture: 6.5%	2.00	#10	73%	
Liquid Limit: 15	1.180	#16	72%	
Plastic Limit: 16	0.600	#30	69%	
Plasticity Index:	0.425	#40	67%	
Classification: SM	0.300	#50	62%	
	0.150	#100	49%	
	0.075	#200	39.1%	



Respectfully submitted,

MATERIALS TESTING & INSPECTION INC.

arriewed by: Lowell Trujillo

m Idaho Regional Manager

Lymp

C:199 JOBS1E99005C180ILS15443,DQC

Invironmental Services

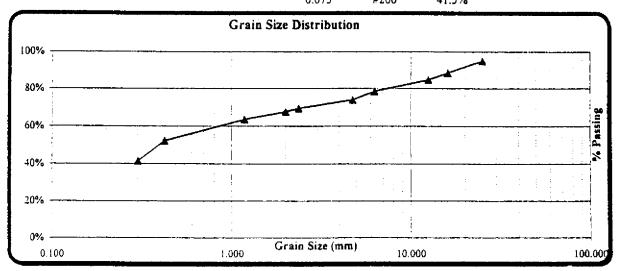
☐ Geotechnical Engineering

☐ Construction Materials Testing

Special Inspections

Sieve Analysis & Grain Size Distribution

Lance Peterson	Sieve	Sieve	Percent	
Phenix Construction	Size	Size	Passing	Specifications
P. O. Box 1626	mm	Inches	·	·
Idaho Fails, ID 83403	75	3"		
	50	2"	100%	
Date Received: May 24, 1999	37.5	1 1/2"	100%	
Sample ID: 5443	25	1"	98%	
Sample Location: Type A	19	3/4"	95%	
	12.5	1/2"	89%	
Percent Moisture: 8.7%	9.5	3/8"	85%	
Classification: ML-CL	4.75	#4	79%	
	2.36	#8	74%	
	2.00	#10	73%	
	1.180	#16	72%	
	0.600	#30	70%	
	0.425	#40	68%	
	0.300	#50	64%	
	0.150	#100	52%	
	0.075	#200	41.5%	



Respectfully submitted,

MATERIALS TESTING & INSPECTION INC.

Reviewed by: Lowell Trujillo

Eastern Idaho Regional Manager



C:199 JOES1E99005C180(LS15444.00C

nvironmental Services

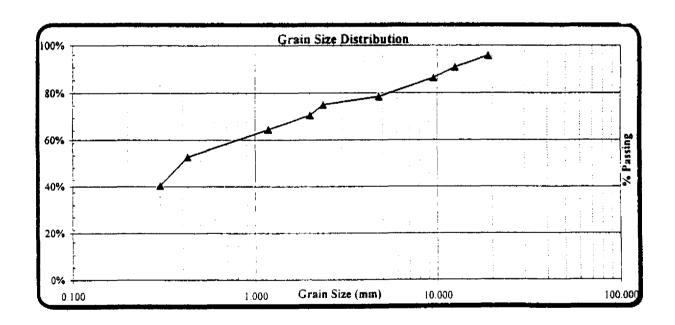
☐ Geotechnical Engineering

☐ Construction Materials Testing

□ Special Inspection

Sieve Analysis & Grain Size Distribution

Lance Peterson	Sieve	Sieve	Percent	
Phenix Construction	Size	Size	Passing	Specifications
P. O. Box 1626	mm	Inches		
Idaho Falls, ID 83403	37.5	1 1/2"	100%	
	25	Į"	99%	
Project: INEEL TRA	19	3/4"	96%	
Source: Type A	12.5	1/2"	91%	
Sample ID: 5444	9.5	3/8"	86%	
Date Received: May 24, 1999	4.75	#4	79%	
	2.36	#8	75%	
Percent Moisture: 7.5%	2.00	#10	75%	
Classification: SM	1.180	#16	73%	
·	0.600	#30	71%	
	0.425	#40	69%	
	0.300	#50	65%	
	0.150	#100	53%	
	0.075	#200	40.4%	



Respectfully submitted,

MATERIALS TESTING & INSPECTION INC.

riewed by: Lowell Trujillo ern Idaho Regional Manager

Soull Frills

LTIKID

208 529-8242

Fax 208 529-6911



			June 7, 199
SUBMITTAL NO.: S-7304449.01-094 Rev.0	PROJECT NO.: OU 2-13 TRA Remedial Acti	SUBCONTRACT NO.: Phenix	S-7304449.01 of Idaho
SUBMITTAL DESCRIPTION:	<u> </u>	<u>. </u>	
LINE IT	EM(s): "A" TEST RESULTS GR "B" "C" "D" "E"	ADATION TYPE A SOIL	
	REVIEW AND COMMENT REQU	JEST FORM	
	X E\$&H -	☐ OTHER -	
X CAM - CRAIG REESE	X CE - JODY LANDIS	☐ OTHER -	
IA - LEO HERBERT	OTHER - PAT TAYLOR	OTHER -	
RESPONSIBLE ENGINEER: Craig Reese	AT: MS/3954 T\$8	BY: JUNE 14	, 1999
	REVIEW COMMENTS AND DI	SPOSITION	
LINE NUMBER	RECOMMENDED DISPOSITION	LINE NUMBER	RECOMMENDED DISPOSITION
REVIEWER:			DATE:
ITTAL DOCUMENTS HAVE BEEN REVIEW	APPROVAL AUTHORITY DIS ED, COMMENTS FROM OTHER REVIEW	POSITION VERS INCORPORATED OR RESC	DLVED, AND FINAL COMMENT
DISPOSITION: A B		COMMENTS: YES N	
RESPONSIBLE ENGINEER:	Mose		DATE:



June 7, 199

SUBMITTAL NO.: S-7304449.01-094 Rev.0	PROJECT NO.: OU 2-13 TRA Remedial Action	SUBCONTRACT NO.: S-7 Phenix of	
SUBMITTAL DESCRIPTION:		1	
LINE ITE	M(s): "A" TEST RESULTS GRAD "B" "C" "D" "E"	ATION TYPE A SOIL	
F	REVIEW AND COMMENT REQUES	T FORM	
	X ES&H	OTHER -	
X CAM - CRAIG REESE	XI CE - JODY LANDIS	OTHER-	
A - LEO HERBERT	OTHER - HAT TAYLOR	OTHER-	
RECORD RECOMMENDED DISPOSITION IF COMMENTS ARE NOT RECEIVED OR NO CONT EVIDENCE THAT THE REVIEWER CONCURS WITH ENGINEER, EVEN IF NO COMMENTS ARE MADE. RETURN COMMENTS RESPONSIBLE ENGINEER: Craig Reese	ACT MADE WITH THE RESPONSIBLE EN-	THE RESPONSIBLE ENGIN	
	REVIEW COMMENTS AND DISPO	OSITION	
LINE NUMBER A	RECOMMENDED DISPOSITION	LINE NUMBER	RECOMMENDED DISPOSITION
REVIEWER: Leo	Hankal		DATE: 6-8-89
TTAL DOCUMENTS HAVE BEEN REVIEWED ISPOSITION PROVIDED.	APPROVAL AUTHORITY DISPO D, COMMENTS FROM OTHER REVIEWER	SITION S INCORPORATED OR RESOLVE	D, AND FINAL CON
DISPOSITION: A B		MMENTS: YES 🗀 NO [ATTACHED:
RESPONSIBLE ENGINEER:			DATE:



			June 7, 1999
SUBMITTAL NO.: S-7304449.01-094 Rev.0	PROJECT NO.: OU 2-13 TRA Remedial Ad	SUBCONTRACT NO.: S- Phenix of	
SUBMITTAL DESCRIPTION:			
LINE ITEN	M(s): "A" TEST RESULTS ("B" "C" "D" "E"	GRADATION TYPE A SOIL	· ·
F	REVIEW AND COMMENT RE	QUEST FORM	
	X ES&H	OTHER-	
X CAM - CRAIG REESE	X CE - JODY LANDIS	OTHER -	
A - LEO HERBERT	OTHER - PAT TAYLOR	☐ OTHER -	
RECORD COMMENTS ON ATTACHED R RECORD RECOMMENDED DISPOSITION	EVIEW RECORD FORM.		
IF COMMENTS ARE NOT RECEIVED OR NO CONT EVIDENCE THAT THE REVIEWER CONCURS WITH ENGINEER, EVEN IF NO COMMENTS ARE MADE. RETURN COMMENTS RESPONSIBLE ENGINEER: Craig Reese		BY: JUNE 14, 1	EER.
	REVIEW COMMENTS AND	DISPOSITION	
LINE NUMBER	RECOMMENDED DISPOSITION	LINE NUMBER	RECOMMENDED DISPOSITION
REVIEWER: U Andia			DATE: 6/9/09
TTAL DOCUMENTS HAVE BEEN REVIEWE DISPOSITION PROVIDED.	APPROVAL AUTHORITY D D, COMMENTS FROM OTHER REV	DISPOSITION NEWERS INCORPORATED OR RESOLV	ED, AND FINAL COMMENT
DISPOSITION: A B	\Box C \Box D	COMMENTS: YES NO	ATTACHED: [
RESPONSIBLE ENGINEER:			DATE:



			June 7, 195	
SUBMITTAL NO.: S-7304449.01-094 Rev.0	PROJECT NO.: OU 2-13 TRA Remedial Ad	SUBCONTRACT NO.: S- Phenix of		
SUBMITTAL DESCRIPTION:				
LINE ITEM	M(s): "A" TEST RESULTS C "B" "C" "D" "E"	SRADATION TYPE A SOIL		
R	EVIEW AND COMMENT REC	DUEST FORM		
	S ES&H.	OTHER -		
X CAM - CRAIG REESE	20 CE - JODY LANDIS	OTHER -		
\A · LEO HERBERT	OTHER - PAT TAYLOR	OTHER -		
IF COMMENTS ARE NOT RECEIVED OR NO CONT. EVIDENCE THAT THE REVIEWER CONCURS WITH ENGINEER, EVEN IF NO COMMENTS ARE MADE. RETURN COMMENTS RESPONSIBLE ENGINEER; Craig Reese		TO THE RESPONSIBLE ENGIN		
	REVIEW COMMENTS AND (DISPOSITION		
LINE NUMBER A	RECOMMENDED DISPOSITION	LINE NUMBER	RECOMMENDED DISPOSITION	
	ı			
REVIEWER: WT	v · v		DATE:	
ITTAL DOCUMENTS HAVE BEEN REVIEWED	APPROVAL AUTHORITY D	ISPOSITION EWERS INCORPORATED OR RESOLVE		
DISPOSITION: A B RESPONSIBLE ENGINEER:	□ C □ D	COMMENTS: YES . NO [DATE:	

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comment that,	טיטטומופט, ייטי	orporated, would improve the document.	Julianii.		

 	MATERIALS AP	B REVISE AND RESUBMIT WORK MAY PROCEED SUBJECT TO ROCOPPORATION OF CHANGES INDICATED	IN-PLACE NUCLEAR DENSITY TEST REPORT
1	NSPECTION, INC.	C REVISE AND RESUBMIT WORK MAY NOT PROCEED	
File#:	99005 C	O REVIEW NOT REQUIRED WORK MAY PROCEED PROJECT	
DATE:	6-1-99	5-7304449 01-093 0 CONTRACT NO INSPECT	OR: D. BIRD
CLIENT:	ENEE!	Br. Chritte Have te	CTOR: PHENIX
PERMIT:	·	DATE WEATHI	0
Of Commercion	. Barriand: 95%	Soiler 5342 Aerobalts	- Nuka Gauss H12

					2. 2	15 (3	
Test S	Wet	Pounds Moisture	Percent S Moisture	Dry Density	Maximum Density	Optimum * Moisture *	Percent Compaction
14)	133.3	12.3	9.2	125.0	123,6	9.4	97.8
Location:	35' 10	OF 50	· 5 112/=	50'W.	بير ش	510A	ור <i>ובוע</i> ייני
1	-41)3	VIIL .					;
型到疆	130.9	1月2	*8.8	113	*123.C=	等9.4/	9675
Location:	30 × N	بح بجشره	SIDIE-	160- W	1707-2	**5)))=	5为? 经产生
	ジニアアパ	- YLEV	<u>élik</u> i,				TO THE PARTY
A 3	177.2	12.3	9,3	119,9	123,6	7,4	97.0
Location:	35 N.	01=5.5	IDJE Ø	5' W. G	7= 1= 5	1DE 4)	DEPTH
	-4' LJ=1	<i>IE</i> L.		1		:	
24	130.7	Toing	813=	119.8	123.6	=9,3) ^{3 3}	391.0
Location :	35 N	57-75	SIDE	100 -V	V. 01=1	= FSIDI	
	シニアル	<u>-ガ*: ルミン</u>	ELECT	ng diga paga at a sa s			A CONTRACTOR
H 2	129.6	8.9	6.8	120.7	123,6	9.4	97.6
Location:	60' Ni	055	S)DE 3	5 E 0	ربه: سر	51DE 4	1) 12/5/27)
	-4))=	VEL	<u> </u>		7. Å	_	•
近人義	为许是	拉門接	7.9.事务	120.5	127.1	47: 4)544	到不計學
Location:	50 7			40 5	S) FW	J=51D)=1	3)11
	DEPTH	二字引建	VECTO				Section 1
#7	130.6	10.6	9.1-	120.0	123.6	5.4	97.0
Location:	59:N.	5 = ره	, SIDE	601=	<u>لاُ =رو۔ ،</u>	1. 5121	= 2717
	ארת ע שכן	-4,77E	ソニン		ि <u>। श</u> ुर १ करा		
H = 0 =	729-93	10-4-	873	120:00	1737.6	等分量	97.0
Location:	7050	10/-25N	多の点	100		795年0月	设力打造
	DEFTA	2502	系污染色		20.100		
#9	132.7	13.6	10,2	119.1	123.6	9.4	91,
Location:	9020	<u>5 ترن</u>	S112E	50' W.	تير تيره	SIDIE -	איר
	LEVEL -	_ '2)	VELS		.		

MATERIALS TESTING &

IN-PLACE NUCLEAR DENSITY TEST REPORT

INSPECTION, INC.

File#:	F_99005 =	PROJECT:	INEELITA
DATE:	6-1-99	INSPECTOR:	טאוט יע
CLIENT:	INEEL	CONTRACTOR:	PHENIX
PERMIT:		WEATHER:	COOL 55° CLOUPY
		_	

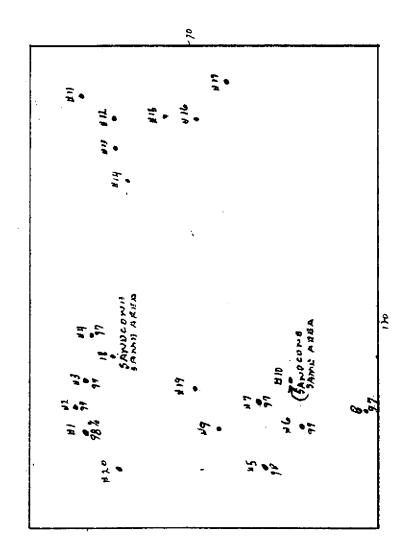
% Compaction Required: _ Soils: 2.26 -< Asphalt: Pounds Percent Dry Moisture Moisture Density Test Wet. Maximum 4 Optimum Percent Density * Moisture Compaction

Location:	SANTO	ONE"	C 45'	NS OF	5,510	<u>E 75%</u>	W.
	عر عرد) DE .	y" DEFTA	1 -21 L	. 压火烂之.		- :
カーリ	133.3	12:3=	19.20	121年	シンプラくぎ	7,4 =	7977A
Location:	35-5-02	-JUE	ND 35	- W. 0	<u>جور جو جو</u>	יייבי	ילנ <i>ולבו</i>
	=5-LEY	- Landware and the same					
ピ)ス	130.1	10.1	177	120.0	123,6	9.4	91
Location:	45: 5 Or	= 10, <u>15</u>	45 CIN	W, 01	= <u>)=</u> . S)1	<u>)) </u>	DIEPTH
	-51-1EV	<u>EL</u>			-		· ·
#)3	737	112	8.5	到19.9-	173.6	=9,41=	97
Location:	451570	ニシル・ビン	0D=55	-10-01	三三:15	10 F 2/2	DEPTH
	二) 注注 (£X#					
# <i>)</i> ⁴	130.6	12.0	9.7	118.6	123.6	9,4	95,9
Location:	50'5.01	= NJ . 15	10060	1		SIDED	<u> </u>
		VEL	· •	<i>:</i> :			
UNITED S	1771a	TISTUS !	配の最内容		4-17-	35	#GN CE
7	ノマン・フィー・ノー・	111	表びずるす	SECTION AND INCOME.	をロスと	年7797至	新/6,7/
Location:	35 5 20		0076	The second second		and the second second	descriptions and the second
Location:	75 520 = 12 = 12			The second second		and the second second	descriptions and the second
Location:	75 5 20 292 3 E		10.75 2.5				descriptions and the second
Location:	* ***	FN E	10.75 2.5	118.6) 23.6	9.4	DE1771 95.9
	* ***	11.3 10 10 NO	20:75 8.6 END 5	118.6) 23.6	9.4	DE1771 95.9
Location:	35 5.	11.3 07 NU -4' L	8.C END 8	118.6 5' W.) 23.6 o)=)=	9.4 510/5	95.9 411
Location:	35 5, DEPTH	1/1,3 1/1,3 1/1,3 1/1,0 1/1,2 1/1,2	8.6 END 8 ENE 6	118.6 5' W.) 23.6 0) = 1= 1) 23.6	9.4 51D/5	95.9 411
Location:	35 S, DEPTH	1/1,3 1/1,3 1/1,3 1/1,0 1/1,2 1/1,2	8.6 END 8 ENE 6	118.6 5' W.) 23.6 0) = 1= 1) 23.6	9.4 51D/5	95.9 411
Location:	35' 5, DE 1277+ 132) 12 2 25 5 6	11, 3 11, 3 11	8.6 END 8 ENE 6	118.6 5' W.) 23.6 0) = 1= 1) 23.6	9.4 51D/S	95.9 411
Location: Location:	35' 5, DEPTH 132) 12 2 25 5 5 6	デル E //、3 のデル ーサ・レ ブラ 引き アル I アル I	8.C END B EVEL 10:11= 2.00	118.6 5' W.) 23.6 of E	9.4 SIDIS 9.4	95.9 21'1

IN-PLACE NUCLEAR DENSITY TEST REPORT

FILE#:	E99005C		PROJECT: INFEL TRA	
DATE:	6-1-99		INSPECTOR: D. BIRD	
CLIENT:	TNEE		CONTRACTOR: PHENIX	
PERMIT:			WEATHER: COOL 55-0 CLOUDY	
% Compaction	Required: 95%	Soils: 5362	Asphait: 252 Nuke Gauge: #7	

Test Number	Wet 3	Pounds Moisture 3	Percent Moisture	Dry Density	Maximum A	Optimum	Percent Compaction
19	130,1	11.1	8.5	119.0	123.6	9,4	96,2
Location:	65' =	راما عرن	5100= 8	15' 50:	OF N.	END -	4" 057
	1) IEV	(<u>)=</u>)					
20 ===	133.1	72.2 學	19./	-120.9	123,6	9,1	277.8元
Cocation:	45 E	OFW.	SIDE	LIO `5	0+0/= y	UFFIND	
	DEVIH	4	LEVEL		The state of the s		
			a <u>;</u> *				
Location:		* (%-				k,	
	2 .					_	
ocation:		A SERVICE TO					
· · · · · ·							
Location:				<u> </u>			
		建建設	36200 T#	WARE !	等的单数		
ocation:	200		الطلقة حباتي والتجازيات أواقع				
ocation:		·		h.		······································	na nina <u>an</u> asa
			# - 11				en it setti.
	a de la sagra						
		t o of the	A STATE OF THE PARTY OF THE PAR	Section of the section of the section of		2000	The second second
- Yana	*		يۇرىخ				
ocation:				am agrice-tical colo	1.		



IN-PLACE NUCLEAR DENSITY TEST REPORT

	E 99005	PROJECT: INEEL TR	A
FILE#:	2 1100.5 -		
DATE:	6-2-99	INSPECTOR: D. BIRD	
	INSEL	CONTRACTOR: PHENIX	Æ
Depart.		WEATHER: COOL CLOUPY	60

PERMIT:		WEATHER:	Cool Cloury 60°
t Erdvitt.	65 Co F71		
% Compaction.		Aspnait:	Nuke Gauge: #17 MUISTURIE STAND.279
	Wet Pounds Percent Moisture Moisture	Dry Maximu Density Density	n Optimum Percent Moisture Compaction
1.	136.6 12.50 9.1	124.1 123.6	9.4 100,
Location:	50 5. OF N. FND 3	O'W. OF E	SIDE 4" DEPTH
****	M CELL 59 -4' LEV	EL, ==	· pa
学名主義	733.71= 73.41= 10.0=	120.3 123-6	9.4 = 97.
Location:	30' 5. OF W. END 40	- N. 01= E.	5102= 4 20007
	成于EELES7 - 1-20EN	<i>[2]</i>	The state of the s
3	130.0:11.3 = 8.61	118,7- 123,6	9,4-96,
Location:	50' S.OF N. FND"30	WOFE	5102= 4" DEPTH
	CELL-57 -4' 1EVE	<u>L</u>	
- L	F3 5-6- 74:110:3	721.5 723.6	9.4 98.3
Location:	30-5-0F-W.END-60	WOFES	りロミーコペットアファチ
	CELL-57-7-1 TEVEL		
.5	131.9 12.9 9.7	19.0 123.6	9.4 962
Location:	50'5 OF N. END	50' E. OF W.	51DJ= 4" DEPT
÷ =	CELL-57 4. LEYE	·	
26	13131313163310703	#21:32 JUSE	宝 37%) 7年 878 7
Location:	TO SOF N. END	E OF WAS	DEPTH
	CEEE TO THE THIS LEV	EPHY SAFETY	
(7)	1380 12.25 8.8	125.75 123,	1 9,4 101
Location:A	50 5. OF N. END 30	1 15.05 W	SIDE 4" DEPTH
SANUCONE	CELL 57 - 4' LEV	<u> </u>	
製り事業	的父母的一个	3 8 7 3 723 7	9999
Location:		DISTERVAL TO STATE	510年到190日在开幕
	是在一个一个一个		
19	127/ 10:1 7.9	117 123,	6 9,4 9,6
Location:	50'S OF N. END	IDIF OF W	S1013 9" DEPTOF
The Wallson	CELL-57 -43 THEVE	Yan 自由自己的关系	in the state of th

MATERIALS TESTING &

INSPECTION, INC.

IN-PLACE
NUCLEAR DENSITY
TEST REPORT

File#:	E. 99005C	PROJECT:	INEEL / TRA
DATE:	6-2-99	Inspector:	D. BIRD
CLIENT:	INEE)_	CONTRACTOR:	PHENIX
PERMIT:		WEATHER:	COOL 590 OVER CHST

% Compaction Required: 95% Soils: 5362 Asphalt: _____ Nuke Gauge: #1)

Test	Wet	Pounds.	Percent	Dry	Maximum	_ Optimum <i>:</i> ::	Percent
	(a Density	Moisture 🞉	- Moisture	Density	Density :		Compaction
10	132.2	12.9	9.7	119.3	123.6	9,4	96.5
Location:	75' 8	. ل <u>ر سرن</u>	SIDE 2	5 E. U	y= Wis	10E 4"	DEPTH
	CJE21 - 5	7 -4	LEVEL				
到于	130:	11.2	8.6	到18.9	123.6	19, 4	96:1
Location:	75-5	OF-N.	51015-3	ره حر- '5	= W. SID.	ミッパララ	וידין
	ZEI	57=21	LEVEL				
12	128:1	8,9	6.9 12	119.2	123.6	9,4	96.4
Location:	75 5.6	15 N. 511	가= 기도,	EDF	W, 5101	= 4" DI	<u> </u>
	CELL-5'	741.	EVEL	Talayar ayan a	glad West Massessel	· ·	
-13	129.0	10:23	=7.9=	== 18.8	-123.6	=9,4-	767
Location	75 5 20	ייינע דענייינ	10)==53	WE O	FW15	101= 41	DEPTH
	CE12:-	5.7]			ر في المالية عمره	
14	130.0	9.6	7.3	120,4	123,6	9.4	97.4
Location:	75 5 A	ای ر <i>ہو =ر</i>	DJ= 50	<u>' הינט אינע</u>	<u> </u>	4" DEP	TH
	CELL	功2) EYEL		123 - 1 2	1175 - 11	
(15) 藩	125.5	米ワシク学	6.15	317,8	-123,6	第9,4 字英	93.3
Location: [3."	25	of sisj	DE=45	-W-07-	ETSIVE	THE DEF	TH
SANDCON	A = C E 1	1-57	المورادو				
16	133.6	13.2	9.8	120,4	723.6	9,4	724
Location:	100, 1/	of 5. 5	DF 35'	ترن که	<u> </u>	4, DE	rth
Service of the servic	AFICEL	1-57 -	4、 <i>) と</i> とくと	= 1		40.62	
	明到智	到0.9金	學分子	はりりか	rezgets	14 TH	
	100 N +0				5)171-	**************************************	7774
	AF CEL	15.7					
-78	1	-11.3 -	-8.6	119.5		9.4	96.6
Location:		<u>) - 5, 5)</u>		יע יינם ביי		א א הער שנה איני איני איני איני איני איני איני אי	
	CELL-E	57 -4º	プロヘビ	E,			

IN-PLACE NUCLEAR DENSITY TEST REPORT

FILE#:	E99005C		PROJECT:	INEEL / TRA
DATE:	6-1-99		INSPECTOR:	P. BIRD
CLIENT:	INEEL	•	CONTRACTOR:	PHENIX
PERMIT:				cool 65 CLOUPY
	Required: 25 %	Soils: 5362		Nuke Gauge: #17
,,			·	-

						.,	
Test	Wet Density	Pounds	Percent Moisture	Dry Density	Maximum =	Optimum = Moisture =	Percent Compaction
(19)	130.2	11.6	8.9	1286	120%	9.4	95,9
Location:	65'N.	0, 5, 5)	DE 45'	= OF W.	31PE -	J' DIEPTH	r is h
SANDON)	E CELL	・57 -	JEV	151.		4.0	4.
力學表	13272	73:27	39.9 =	1190	42376	<i>7,1)-</i>	96,24
Location	50 3/3	0-5.5	IDE 56	E. OF	พะภะ	E TELLY	DEPTH
	CZZZ	57	3 , FE	シヹ゚゚゚゚			
(21)	125.5	7.7	6.1	117.8	123.6	9.4	95.3
Location:	50' N	OF 5	5100	25\ j= c	1- W,	SIDE -	<u>- 4:11 : : :</u>
Sournie	UEYTH.	AT C	11 -57	- 3	LEVEL	models. Accument to an area	
- Marian	Section Con-	Tare Sec				****	ALC: NO.
Location:		276 2 7414					
<u> </u>				·			
Location:	<u>1</u> 14.			<u>:</u>	<u>.</u>		
		- Chang Swam 76 Tarks	are and the second seco	leader than the same	enditions in Frances	Tallet arrangement and	Table of Name Inc. 200
		深深深深		*********			
Location and							
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The second secon					The second second second		
Location:							Park Sant Sant
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IN-PLACE NUCLEAR DENSITY TEST REPORT

File#:	£9900	5 C		PROJE	CT:	INFE!	JTRA	
DATE:	6-3-99			INSPEC	TOR:	D. BIRD	, <u> </u>	
CLIENT:	INEEL	-		Contr	RACTOR:	PHENIX	<u> </u>	
PERMIT:				WEAT	HER:	زو یا صدیمت	2º RAINY	,
% Compaction 574 k/	Required: 93	3485	Soils:5 <u>%2</u>	Aspha	ic Na157.	Nuice C	. /7	66
Test Number	Wet Density	Pounds Moisture	Percent Moisture	Dry-	Maximu	m. Cotimum	Percent Compaction	Ţ -
# / :	7/3	S.A	6,1	123.0	123.6	1	100	1
Location:	60 N.	7 5 BN			. SID.	/tl _	+ HTC9	
	AT - 3	BELOW (سرخ خرجر	والتاك	57	:	<u> </u>]
#2	730.2	7.9	6.0	122.3	123.6	9,4	999	1
Location:	60 N.O	FS. EN	12 75 V	<u> </u>	5127	- '9'	2774	_
-250,-;	3 64	MAEGR	ADJE	C1=11-5	7	The second secon]
\$ 300 e	1533.0	11.9	BAT	121,1	123.6	9:4"	97,9	
Locations/	381N 9	بر <u>ت</u> ری ترو	10-55	N. DJ- E	. 51D	معرور الراب سے	بدرومو	1
Pr Sal	-3 - GK	ADI	CEL	1-57	<i>:</i>			_
HYE!	135/00	5/20.3	9.3	1/9.7	123.6	9.4	96.8].
Location:	88 N 0	डि॰द्रा दूर	10-65	WOFE	= 517	デーリッペン	ビンフト	
el e- destinati - dominion	- 3' 191	Low &	RADIE	CE11-5	<u>ታ መመ</u>	THE WAR	क्षा करियों कार्य के जिल्ला जान के लें जिल्ला]
# 5	131.5	10,9	8.2	120.6	123.6	9,4	97,5	
Location:	50' N C	یتر ک شره	WD 35'	ترن جر	W, 5	105 7"	DEPTH	
(1) (1)	-3' B	ELOW G	PADIE	CE11.5	7			
46	17975	775:3年	17.935	到19.2	123.6	達 39.4%	96.4	
Location:	75 N.	ディデ	NO 35	ENFY	1. 3101	ミングアク	EPTH	
	-3-495	Low G	PADE	CECL	- > 4	生工机等基础	-	
#7	134, [54.2	10,5	÷119,9	123.2	9,2	= 97.0	
Location:	75 N	DF 5, /5.	NO 315	سره التي	W, 51	VE 4)" 1	7£7 ² TH]
	– 3 ' β <i>Ε</i> Σ	ow.GRA	ا ترود	2-22-57	rais h			
# 2	728.9	是[[0] 图	*855	\$117.9°	723.7	学 当9.37	第95.3章	
Location:	アンラン フ		EXDES	79年	VV	からから	着すりよアハ	ķ
	77 RET	W GRI	る言葉が	ELE:57	的人,满			
79)	131.0	8.1	hil	122 9	1:23.1	9,4	99.9]
Location:	75' N.	بنبئ جرو	END G	5 13.0	بهر تينر	518E 4"	W-PTH	
SANUCANE	-3: 322	in GAAL			1.75			

Location: B. 115

IN-PLACE NUCLEAR DENSITY TEST REPORT

SIDE 4" DEPTH

		•	
File#:	99005c	PROJECT:	INEEL / THA
DATE:	6-3-99	. INSPECTOR:	D, BIRD
CLIENT:	INEEL	CONTRACTOR:	PHEIVIX
PERMIT:		WEATHER:	COOL-55- CLOURY
	Required: 95% Soils: 536	, 	Nuke Gauge: #/7
6 Compaction I	Required: Soils: 2.3 4 == R D = 34) 8 5	•	Nuke Gauge:
Test	Wet Pounds Percent Density Moisture Moisture	Dry Maximu	ım Optimum Percent
×/0	128.0 11.0 8.5	117.0 123,0	
Location:	40' 5. OF N. END 40'	E. OF W. 91	DE 4" DEPTH
•	-3' LEVEL AT CELL.	57	
7/	127.3 9.3 = 27.3	=118.0 123.6	9.4 95.4
Location:	HO-5. OF N. END 50 E	-, OF W, 5)1	DE 4* DEPTH
	-3 LEVEL AT CELL		
12	1-30.1 10.6 8.1	119.5 123.0	1 9,4 96,6
Location:	90'S OF N, END 60'	1=. 0x W1. 5	IDJ= 4" DEPTA
•	-31. LEVELAT CELL.	-57	
b 13	129.0 70.0 17.7	119.0 123,	6 9,9 96.2
Location:	50 S. OF N. END 35 Y	VOFE. SIDE	4" DEPTH
	-3 LEVEL AF CELL-5	7	
# 14 ·	130.9 11.6 8.8	119.3 123.	6 9,4 96.5
Location:	50' 5, OF N. END 45'		DE 4" DEFTH
	-3' LEVEL AT CELV-5		
K15二音	127.6 10:04 31.8 2	31176 723.	2 9.3 95 E
Location:	50 5 DE N. END 55	HOFE SID	E 4" DEPTH
	3 EVELATECELLE	5万层本 军军的大势	第二十二十二十二十二十二十二十二十二十二十二十二十二十二十二十二十二十二十二十
H 16	132.1 11.3 8.5	120.8 123.1	6 94 97.7
Location:	56' 5. OF N. ENDT	5' W. 0=1=	SIDE Y" DEPTH
	-3' LEVEL AF CLELL -	57	
学)7至建	794.3 三万元建制汇票	7214 725	5 79,4 298,2
Location:	5035 0 NAFNO 8.	5-10/01-12	51D1-1411-15
	DEPTH = 3 DEVEL A	T-CFIL-57	

MATERIALS —TESTING & INSPECTION, INC.

IN-PLACE NUCLEAR DENSITY TEST REPORT

FILE#:	99005	د		_ PROJE	ict: 🚣	NEEL)	TRA
DATE:	6-3-9	9	***	_ Inspe	CTOR: 12	BIRD	
CLIENT:	INCE	L		CONT	ractor: 💆	14E111X	
PERMIT:		<u> </u>		WEAT	HER:	001 59	رداں مدے ت
% Compaction I		5 % 3 5	Soils: <u>536</u>	•	de <u> </u>	Nuke Gau	ge: <u>#17</u> 7 = 2666
Test.	Wet	Pounds — Moisture	Percent. Moisture	Dry Density	Maximum Density	Optimum 	Percent Compaction
19	129:8	10,7	8.2	119,1	123,6	9, 4)	96.3
Location:	60' N.	0, E 1	VD 50'	w,	E. SIVE	<u> ニーツ" ひど</u>	HTG
Maria de maria de	AT -2' 1E	VEL E	E12-5"	7	burner of a second	1 	1802
370	<i>733.</i> 3	F17-93	8,9	12).4) =	723.6	9.4	78,2
Location	75 N. C	5F 5, E		W. 0F	Sand Paris .	<u> </u>	אתקשבו
	<u>メナーユ</u>	ジェング	CELL	-51	The state of the s		TO THE PARTY OF TH
	12	<u> </u>	<u> </u>		<u> </u>		
Location:	- 		· · · · · · · · · · · · · · · · · · ·				
			The Part of Sale				
Location:	7.00 am 10.00 ft.			ng galawa ng galawan (Pisa ng maganang menangan dalam ng menangan		ر د دورشور مورود دورشور	and the second s
			e Tour Transfer eren et 1885 August		ام را روزونغور شارا سند واراده خوون <u>است</u> ا	Marsh Indian Company	ar and a second
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Location:							
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VENDOR DATA REVIEW TRANSMITTAL SHEET

			July 1, 1999
SUBMITTAL NO.: S-7304449.01- 9 5 Rev. /	PROJECT NO.: OU 2-13 TRA Remedial Action	SUBCONTRACT NO.: S- Phenix of	
SUBMITTAL DESCRIPTION:			
LINE ITEM		PE A SOIL 1957 CELL 5.	/26/99
"B "C	TEST REPORTS TYPE A SOIL	1957 CELL 5/27/99	
"")")	
R	EVIEW AND COMMENT REQUES	ST FORM	
	X ES&H -	OTHER -	
X CAM - CRAIG REESE	₩ CE - JODY LANDIS	OTHER -	
QA - LEO HERBERT	□ OTHER - Pill C.	OTHER -	
RECORD COMMENTS ON ATTACHED RE	VIEW RECORD FORM.		
RECORD RECOMMENDED DISPOSITION	9.000 mm	SINEER BY THE REGUIRED RETI	IBN DATE IT WILL BE
IF COMMENTS ARE NOT RECEIVED OR NO CONT. EVIDENCE THAT THE REVIEWER CONCURS WITH ENGINEER, EVEN IF NO COMMENTS ARE MADE.	DOCUMENT IN REVIEW. THE ENTIRE P	ACKAGE MUST BE RETURNED	TO THE RESPONSIBLE
	AND SUBMITTAL PACKAGE TO	(+ m 1503 - 44 13 6 m 1506 20 13 4 4 4 4 4 4 4 4 1	\$600.000 (\$400.000)
RESPONSIBLE ENGINEER:	I and the second	BY: JULY 9, 1999	
Craig Reese	MS/3954 TSB		
	REVIEW COMMENTS AND DISPO	SITION	
	RECOMMENDED		RECOMMENDED
LINE NUMBER	DISPOSITION	LINE NUMBER	DISPOSITION
A			
REVIEWER:		<u></u>	DATE:
			<u></u>
AND DISPOSITION PROVIDED.	APPROVAL AUTHORITY DISPOS COMMENTS FROM OTHER REVIEWERS	SITION SINCORPORATED OR RESOLVE	D, AND FINAL COMMENTS
DISPOSITION: A B		IMENTS: YES 🗹 NO 🗆	1
			DATE:
RESPONSIBLE ENGINEER:	Theer D 265		7/12/99
	B-365		

24 A 2 Սուռ<u>06–10–99</u> in biguporate any entirents 2.1-89 Deciment = 7 FINAL TEST REPORT TYPE A SOIL 1957 CELL 5-27-99 FINAL TEST REPORT TYPE A SOIL FINAL TEST REPORT TYPE A SOIL SOIL FINAL TEST REPORT TYPE A SOIL Sidestiful Data Description AMD DISPOSITION ORIGINA Ξ nt db Subsentincter PHEHIX OF LIDANO, 111C. FINAL TEST REPORT 1957 CELL 5-26-99 1957 CELL 6-1-99 1957 CELL 6-2-99 (20). I acknowledge receipt of the detabulicated and 957 CKIL 6-3-99 Subsembretá Agastur (23) I | Additional Community Attached VEHUOR DATA TRAHSHITA E To 11.51 Date of Submitted (20) Subcontractor Signatura Ox Eu Apvl (22) Comments: 17 12. Hevise and resuburit. Work may proceed subject to lucurporation of convisions insted. Mang × E 2 2 2 2 2 the terror processed southest to becomendated of any consumpt nated į Signature Becali 13 5 PARSONS FROINEBRING SCIENCE, INC. AND 9, VIOLOPHIEF AVE. P.O. ROX 10751 Ξ 4 Distribution Work may not proceed. Oly fact I'r) thevites not required. Work may proceed. VDS fram CAM 3-04 3-04 3-04 Alaka Labe, Maka 03416-3964 3-04 3-04 _rna_ ALID Deciment Control Forwardad Wall Stop MS 3954 i. Spine, the 02200 (1.3.1) (1.3.1)(1.3.1)(1.3.1)Ξ 1. 1 Weine purk anything 02200 02200 02200 02200 <u>ار</u> (19) Hamarke Distribution tier frem 11.1 0171Date Breakent ESAH Ξ 30 *:* ' B-367

Ξ

SEE INSTRUCTIONS OF REVENSE SIDE



VENDOR DATA REVIEW TRANSMITTAL SHEET

SUBMITTAL NO.: S-7304449.01-096 Rev.0	PROJECT NO.: OU 2-13 TRA Remedial Ad	SUBCONTRACT NO.: S-7304449.01 Phenix of Idaho
SUBMITTAL DESCRIPTION:	<u></u>	
LINE ITEM	"B" FINAL TEST REPO "C" FIANL TEST REPO "D" FINAL TEST REPO	ORTS TYPE A SOIL 1957 CELL 5/26/99 ORTS TYPE A SOIL 1957 CELL 5/27/99 ORTS TYPE A SOIL 1957 CELL 6/1/99 ORTS TYPE A SOIL 1957 CELL 6/2/99 ORTS TYPE A SOIL 1957 CELL 6/3/99
F	REVIEW AND COMMENT RE	QUEST FORM
	XX ES&H -	□ OTHER -
X CAM - CRAIG REESE	X CE - JODY LANDIS	OTHER -
MA - LEO HERBERT	OTHER - BILL OVERHOLT	☐ OTHER -
RESPONSIBLE ENGINEER: Craig Reese	AT: MS/3954 TSB	BY: JUNE 28 , 1999
	REVIEW COMMENTS AND [DISPOSITION
LINE NUMBER	RECOMMENDED DISPOSITION	LINE NUMBER RECOMMENDED DISPOSITION
A	A	
В	<u>13</u>	
D	<i>B</i>	
E	13	
REVIEWER: William J. Bu	sholf	DATE: 6/28/99
"TTAL DOCUMENTS HAVE BEEN REVIEWER ISPOSITION PROVIDEO.	APPROVAL AUTHORITY D D, COMMENTS FROM OTHER REVI	ISPOSITION EWERS INCORPORATED OR RESOLVED, AND FINAL COI
DISPOSITION: A B		COMMENTS: YES NO ATTACHED;
RESPONSIBLE ENGINEER:		DATE:
	B-368	

Design document	LEW SHILDS Date			SOLUTION			
		96 Rev. O	Page: 1 of	COMMENT RESOLUTION			
	REVIEW RECORD	: Submittel S- 7304449.01 - 096 Rev. O	ĺ	COMMENT		Test number(5) Shouth Road 96% Compaction	Test #(5) should read 96% Composition
	DOCUMENT	Document Number/Title:		CODE			
S		Document	Reviewer:	PAGE	NUMBER	7 50/	/of 3
PARSONS		00/00			NUMBER	1	
	•	Project Ten DD/DA	Submittal No.	TEM	NUMBER	Line 'S"	Line " A"

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B-369	ine E"		20f2		705 4 12 should sad	
	11				Test # 16 should wad	
 _						
<u></u>						
						Date:
	Comment Resoli Codes: M - Sign	Comment Resolutions Accepted By Reviewer: Codes: M - Significant comment requires reso	3y Reviewer: requires resolution ar	sceptance from	Comment Resolutions Accepted By Reviewer: Codes: M - Significant comment requires resolution acceptance from Reviewer. S - A suggestion to improve the document; resolution response required. E - Editorial Codes: M - Significant comment requires resolution acceptance from Reviewer.	nent: resolution response required. E - Editorial
	comment that, i	if incorporated, w	comment that, if incorporated, would litiplove the document	on water		



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Lance Peterson Phenix Construction P. O. Box 1626 Idaho Falls, ID 83403

Project: INEEL TRA Inspector: Dean Bird

Inspection Date: May 26, 1999

MOISTURE DENSITY TEST REPORT

As request	ed MTI performed on-site density		ce with current applic		The results obtained v	:follows عبر vere
Test #	Location	Percent Moisture	Dry Density (pcf)	Proctor Number	Percent Compaction	Pass/Fail
1	35' South of north end, 100' East of west side, 4" depth at chem leech pond	6.7	125 <u>.0</u>	p5362	100%	Pass
	,		Sandcone Test			
	Test Number	Location	Percent Moisture	Dry Density (pcf)	Percent Compaction	
	Lab # 5470 Same a	s above	7.5	123,7	100%	

	Test #	Location		Percent Moisture	Dry Density (Proctor Number	Percent Compactio	n
	2	30' North of south end, 1 East of west side, 4" dep the warm waste pond 57	oth at	8.0	113.5	i	p5362	92%	
		NOTE: This test is for Gauge accuracy only	Nuke	Sandcor	e Test				
		Test Number	Location		Percent Moisture	Dry Density (pcf)	Correlat within 5%		
		Lab # 5471 Same as a	above		7.9	114.2	Yes		
Test #		Location	Percent Moistur		Dry nsity (pcf)	Proctor Number	Pero Compa		Pass/Fail
3	pit, 10	orth of south end of south 0' West of east side, 4" at -5' grade, at warm pond	6.6		121.4	p5362	98	%	Pass

C:199

est #	Location	Percent	Dry	Proctor	Percent	Pass/Fail
CSC II	Location	Moisture	Density (pcf)	Number	Compaction	I aow Faii
4	50' North of south end of south pit, 150' West of east side, 4" depth at-5' grade, at warm waste pond	8.3	120.7	p5362	97% '	Pass
5	100' North of south end, 50' East of west side, 4" depth at – 5' grade, at warm waste pond	7.9	117.5	p5362	95%	Pass
6	North Pit, -5' Grade at 4" depth, 50' North of south end, 50' West of east side of warm waste pond	6.9	125.0	p5362	400% /	Pass
	ροπα	S	andcone Test			
	Test Number	Location	Percent Moisture	Dry Density (pcf)	Correlation within 5%	
	Lab # 5472 Same as ab	oove	6.9	127.4	Yes	
est#	Location	Percent Moisture	Dry Density (pcf)	Proctor Number	Percent Compaction	Pass/Fail
7	55' South of north end, 75' West of east side, 4" depth, 5' below grade, south pit, warm waste pit	8.6	119.9	p5362	97% ^	Pass
8	75' South of north end, 55' East of west side, 4" depth, 5' below grade, south pit, warm waste pit	6.2	120.8	p5362	97% ′	Pass
9	65' South of north end, 75' West of east side, 4" depth, -5' below grade, warm waste pit	7.4	119.9	p5362	97%	Pass
10	50' South of north end, 40' West of east side, 4" depth, -5' below grade, warm waste pit	7.7	118.7	p5362	96%	Pass
11	100' South of north end, 40' West of east side, 4" depth, 5' below grade, warm waste pit	8.5	121.5	p5362	98%	Pass
12	75' North of south end, 40' West of east side, 4" depth, 5' below grade, warm waste pit	7.6	120.3	p5362	97%	Pass



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nviro	nmental Services Geotechnic	cal Engineering	☐ Cor	nstruction Materials Testir	ng □Spe	ecial Inspection
13	100' North of south end, 46' West of east side, 4" depth, 5' below grade, warm waste pit	7.1	118.5	p5362	96%	Pass
14	40' South of north end, 40' West of east side, 4" depth, 5' below grade, warm waste pit	8.3	119.1	p5362	96%	Pass
15	45' North of south end, 50' East of west side, 4" depth, 5' below grade, warm waste pit	4.8	121.4	p5362	98%	Pass
16	35' East of west side, 100' North of south end, 4" depth, 5' below grade, warm waste pit	8.2	119.0	p5362	96%	Pass
17	75' East of west side, 85' North of south end, 4" depth, 5' below grade, warm waste pit	9.4	120.4	p5362	97%	Pass
18	70' North of south end, 100' West of east side, 4" depth, 5' below grade, warm waste pit	8.6	118.6	p5362	95%	Pass
19	85' South of north side, 65' West of east side, 4" depth, 5' below grade, warm waste pit	5.2	120.0	p5362	97%	Pass
20	50' East of west side, 65' North of south end, 4" depth, 5' below grade, warm waste pit	7.9	118.1	p5362	96%	Pass
	Required Compaction of densities:	: 95%	Proctor #	p5362: 123.6 pcf@	9.4% moistu	re

If you have any questions concerning this report, please call us at (208) 529-8242.

Respectfully submitted,

MATERIALS TESTING & INSPECTION INC.

Reviewed by: Lowell Trujillo Eastern Idaho Regional Manager

cc: Lance Peterson

LT/klp

		5470	
, 	E99005c		INEEL/TRA
	May 26, 1999	Inspector:	
	Phenix	Contractor:	Phenix
Location: 35' S	outh of north end, 100' east of west sid	<u>e. </u>	· · · · , · · · · · · · · · · · · · · ·
	Hole Volume Calc	ulation:	
	Sand Jar ID =	A	
	Original Sand Weight =		
	Remaining Sand Weight =		
	Discharged Sand Weight =		
	Weight of Sand in Funnel =	2.80	
	Weight of Sand in Hole =	4.72	
	Volume of Hole (ft^3) =	0.059	
	Unit Weight of Sand (pcf) =	80.14	
	Hole Density Calc	ulation:	
	•		
	Pan ID =	Jesse	
	Pan ID = Tare =	Jesse 0.80	
	Pan ID =	Jesse 0.80 8.65	
	Pan ID = Tare = Pan + Wet Soil =	0.80 8.65 8.10	
	Pan ID = Tare = Pan + Wet Soil = Pan + Dry Soil =	Jesse 0.80 8.65 8.10 0.55	
	Pan ID = Tare = Pan + Wet Soil = Pan + Dry Soil = Mass of Moisture =	Jesse 0.80 8.65 8.10 0.55 7.5	
	Pan ID = Tare = Pan + Wet Soil = Pan + Dry Soil = Mass of Moisture = Percent Moisture =	Jesse 0.80 8.65 8.10 0.55 7.5	
M	Pan ID = Tare = Pan + Wet Soil = Pan + Dry Soil = Mass of Moisture = Percent Moisture = Weight of Dry Soil = Density of Removed Soil =	Jesse 0.80 8.65 8.10 0.55 7.5 7.30 123.7	on:
М	Pan ID = Tare = Pan + Wet Soil = Pan + Dry Soil = Mass of Moisture = Percent Moisture = Weight of Dry Soil = Density of Removed Soil = Disture-Density Gauge/Sand	Jesse 0.80 8.65 8.10 0.55 7.5 7.30 123.7	on:
M	Pan ID = Tare = Pan + Wet Soil = Pan + Dry Soil = Mass of Moisture = Percent Moisture = Weight of Dry Soil = Density of Removed Soil =	Jesse 0.80 8.65 8.10 0.55 7.5 7.30 123.7 Cone Correlation 125.0	on:
M	Pan ID = Tare = Pan + Wet Soil = Pan + Dry Soil = Mass of Moisture = Percent Moisture = Weight of Dry Soil = Density of Removed Soil = Disture-Density Gauge/Sand In Place Nuclear Density =	Jesse 0.80 8.65 8.10 0.55 7.5 7.30 123.7 Cone Correlation 125.0 6.7	on:

	Lab Number:	5471	
Project No:	E99005c	Project:	INEEL/TRA
Date:	May 26, 1999	Inspector:	Dean Bird
Client:	Phenix	Contractor:	Phenix
Location: 30' no	orth of south end, 100' east of west sid	le.	
	Hole Volume Cald	culation:	
	Sand Jar ID =	<u>B</u>	
	Original Sand Weight =	11.26	
	Remaining Sand Weight =	3.76	
	Discharged Sand Weight =	7.50	
	Weight of Sand in Funnel =	2.80	
	Weight of Sand in Hole =	4.70	
	Volume of Hole (ft^3) =	0.059	
	Unit Weight of Sand (pcf) =	80.14	
	Hole Density Calc	ulation:	
	Pan ID =	Brook	
	Tare =	0.80	
	Pan + Wet Soil =	8.07	
	Pan + Dry Soil =	7.54	
	Mass of Moisture =	0.53	
	Percent Moisture =	7.9	
	Weight of Dry Soil =	6.74	
	Density of Removed Soil =	114.2	
M	oisture-Density Gauge/Sand	d Cone Correlation	on:
	In Place Nuclear Density =	113.5	
	In Place Nuclear Moisture =	8.0	
	Sand Cone Density =	114.2	
	Sand Cone Moisture =		
Remarks: Corre	elates with in place density test no. 2.		

	Lab Number:	5472	
Project No:	E99005c	Project:	INEEL/TRA
Date:	May 26, 1999	Inspector:	Dean Bird
Client:	Phenix	Contractor:	Phenix
Location: North	Pit - 50' north of south end, 50' west	of east side.	
	Hole Volume Cald	culation:	
	Sand Jar ID =	<u> </u>	
	Original Sand Weight =	11.68	
	Remaining Sand Weight =	4.30	
	Discharged Sand Weight =	7.38	
	Weight of Sand in Funnel =	2.80	
	Weight of Sand in Hole =	4.58	
	Volume of Hole (ft^3) =	0.057	
	Unit Weight of Sand (pcf) =	80.14	
	Hole Density Cald	culation:	
	Pan ID =	Bethany	
	Tare =	0.98	
	Pan + Wet Soil =	8.74	
	Pan + Dry Soil =	8.24	
	Mass of Moisture =	0.50	
	Percent Moisture =	6.9	
	Weight of Dry Soil =	7.26	
	Density of Removed Soil =	127.4	
Mo	oisture-Density Gauge/San	d Cone Correlati	on:
	In Place Nuclear Density =	125.0	
	In Place Nuclear Moisture =	6.9	
	Sand Cone Density ≈	127.4	
	Sand Cone Moisture =	6.9	
Remarks: Como	elates with in place density test no. 6.		
	t no. 5417, dated May 20, 1999.		
~	nd cone tests have been reported for	07/	

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Environmental Services

Geotechnical Engineering

Construction Materials Testing

Special Inspect

Lance Peterson Phenix Construction P. O. Box 1626 Idaho Falls, ID 83403

Project: INEEL TRA Inspector: Dean Bird

Inspection Date: May 27, 1999

Note: All tests were taken at the warm waste pond at 4" depth, -4' below grade

MOISTURE DENSITY TEST REPORT

As request	ed MTI performed on-site density tes		e with current applica		The results obtained v	vere as follows:
Test #	Location	Percent Moisture	Dry Density (pcf)	Proctor Number	Percent Compaction	Pass/Fail
1	35' West of east side, 30' South of north end	8.3	120.3	p5362	97%	Pass
		S	andcone Test			
	Test Number	Location	Percent Moisture	Dry Density (pcf)	Correlation within 5%	
	Lab # 5474 Same as a	bove	8.9	119.1	Yes	

Test #	Location	Percent Moisture	Dry Density (pcf)	Proctor Number	Percent Compaction	Pass/Fail
2	35' West of east side, 75' South of north end	7.3	120.6	p5362	98%	Pass
3	50' North of south end, 35' West of east side	8.5	117.3	p5362	95%	Pass
4	35' North of south end, 55' West of east side	8.4	113.6	p5362	96%	Pass
5	50' North of south end, 60' West of east side	7.8	118.2	p5362	97% 16%	Pass
6	30' South of north end, 60' West of east side	9.1	120.8	p5362	98%	Pass
7	60' South of north end, 30' West of east side	8.7	120.5	p5362	97%	Pass
8	65' West of east side, 50' North of south side	7.8	119.6	p5362	97%	Pass
9	50' North of south side, 60' East of west side	8.5	118.0	p5362	95%	Pass
10	35' North jof south side, 50' East of west side	8.5	117.0	p5362	95%	Pass



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Test #	Location	Percent Moisture	Dry Density (pcf)	Proctor Number	Percent Compaction	Pass/Fail
11	40' West of east side, 60' North of south side	7.0	118.2	p5362	96%	Pass
12	40' West of east side, 60' North of south side	7.7	119.9	p5362	97%	Pass
13	35' East of west side, 35' South of north side	8.4	119.9	p5362	97%	Pass
I 4	35' East of west side, 47' South of north side	8.6	118.6	p5362	96%	Pass
15	35' East of west side, 47' South of north side	6.6	118.7	p5362	96%	Pass
16	35' East of west side, 90' South of north side	7.3	119.0	p5362	96%	Pass
		San	idcone Test			
	Test Number	Location	Percent Moisture	Dry Density (pcf)	Correlation within 5%	
	Lab # 5473 Same as a	above	7.8	115.6	Yes	
îest#	Location	Percent Moisture	Dry Density (pcf)	Proctor Number	Percent Compaction	Pass/Fail
17	35' East of west side, 40' North of south side	9.2	120.9	p5 36 2	98%	Pass
18	35' East of west side, 35' North of south side	10.3	120.2	p5362	97%	Pass
19	20' North of south side, 38' East of west side	3.6	118.6	p5362	96%	Pass
20	35' North of south side, 35' West of east side	8.2	118.0	p5362	95%	Pass

If you have any questions concerning this report, please call us at (208) 529-8242.

Required Compaction of densities: 95%

Respectfully submitted,

MATERIALS TESTING & INSPECTION INC.

viewed by: Lowell Trujillo em Idaho Regional Manager

Lance Peterson

LT/klp

Proctor #

p5362: 123.6 pcf @ 9.4% moisture

	Lab Number:	5474	
Project No:	E99005c	Project:	INEEL/TRA
Date:	May 27, 1999	Inspector:	Dean Bird
Client:	Phenix	Contractor:	Phenix
Location:	35' west of east side, 30' south of north end	1.	
	Hole Volume Cald	culation:	
	Sand Jar ID =	8	
	Original Sand Weight =	11.68	
	Remaining Sand Weight =	4.50	
	Discharged Sand Weight =	7,18	
	Weight of Sand in Funnel =	2,80	
	Weight of Sand in Hole =	4,38	
	Volume of Hole (ft^3) ≈	0.055	
	Unit Weight of Sand (pcf) =	80.14	
	Hole Density Calc	culation:	
	Pan ID =	Jesse	
	Tare =	0.80	
	Pan + Wet Soil =	7.93	
	Pan + Dry Soil □		
	Mass of Moisture =	0.58	
	Percent Moisture =	8.9	
	Weight of Dry Soil =	6.55	
	Density of Removed Soil =	119.1	
	Moisture-Density Gauge/Sand	d Cone Correlat	ion:
	In Place Nuclear Density =	120.3	
	In Place Nuclear Moisture ■	8.3	
	Sand Cone Density =	119.1	
	Sand Cone Moisture =		
Remarks:	Correlates with in place density test no. 1.		

	Lab Number:	5473	
Project No:	E99005c	Project:	INEEL/TRA
Date:	May 27, 1999	Inspector:	Dean Bird
Client:	Phenix	Contractor:	Phenix
Location:	35' east of west side, 90' south of north side		
	Hole Volume Calcu	ulation:	
	Sand Jar ID =	Α	
	Original Sand Weight =	11.75	
	Remaining Sand Weight =	4.55	
	Discharged Sand Weight =	7.20	
	Weight of Sand in Funnel =	2.80	
	Weight of Sand in Hole =	4.40	
	Volume of Hole (ft^3) =	0.055	
	Unit Weight of Sand (pcf) =	80.14	
	Hole Density Calcu	ulation:	
	Pan 1D =	Brook	
	Tare =	0.80	
	Pan + Wet Soil =	7.72	
	Pan + Dry Soil =	7.16	
	Mass of Moisture =	0.56	
	Percent Moisture =	7.8	
	Weight of Dry Soil =	6.36	
	Density of Removed Soil =	115.6	
	Moisture-Density Gauge/Sand	Cone Correlat	tion:
	In Place Nuclear Density =	119.0	
	In Place Nuclear Moisture =	7.3	
	Sand Cone Density =	115.6	
	Sand Cone Moisture =	7.8	
Remarks:	Correlates with in place density test no. 16.		·
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Services Environmental Services Geotechnical Engineering Construction Materials Testing Special Inspecti-

Jance Peterson Phenix Construction P. O. Box 1626 Idaho Falls, ID 83403

Project: INEEL TRA Inspector: Dean Bird

Inspection Date: June 1, 1999

Note: All tests were taken at Cell 57 at 4" depth, -4' level

MOISTURE DENSITY TEST REPORT

As requeste Test #	ed MTI performed on-site density to Location		DENSITY TEST RE ce with current applic Dry Density (pcf)		The results obtained w Percent Compaction	rere as follows: Pass/Fail
1	35' North of south side, 50' West of east side	9.2	121.0	p5362	98%	Pass
2	30' North of south side, 60' West of east side	8.8	119.3	p5362	97%	Pass
3	35' North of south side, 75' West of east side	9.3	119.9	p5362	97%	Pass
4	35' North of south side, 100' West of east side	8.3	119.8	p5362	97%	Pass
5	60' North of south side, 25' East of west side	6.8	120.7	p5362	98%	Pass
6	50' North of south side, 40' East of west side	7.9	120.5	p5362	9 7%	Pass
7	59' North of south side, 60' East of west side	8.1	120.0	p5362	97%	Pass
8	7' North of south side, 60' East of west side	8.3	120.0	p5362	97%	Pass
9	80' North of south side, 50' West of east side	10.2	119.1	p5362	96%	Pass
10	45' North of south side, 75' West of east side	8.9	117.5	p5362	95%	Pass
		S	andcone Test			
	Test Number	Location	Percent Moisture	Dry Density (pcf)	Correlation within 5%	
	Lab # 5518 Same as	above	9.3	121.3	Yes	
Test #	Location	Percent Moisture	Dry Density (pcf)	Proctor Number	Percent Compaction	Pass/Fail
ΙΙ	45' South of north end, 35' West of east side	9.2	121.0	p5362	98%	Pass

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`est #	Location	Percent Moisture	Dry Density (pcf)	Proctor Number	Percent Compaction	Pass/Fail
12	45' South of north end, 35' West of east side	7.7	120.0	p5362	97%	Pass
13	45' South of north end, 45' West of east side	8.5	119.9	p5362	97%	Pass
14	50' South of north end, 66' West of east side	9.1	118.6	p5362	96%	Pass
15	35' South of north end, 75' West of east side	8.6	122.3	p5362	99%	Pass
16	35' South of north end, 85' West of east side	8.6	118.6	p5362	96%	Pass
17	25' South of north end, 100' West of east side	10.7	120.7	p5362	98%	Pass
18	30' South of north end, 65' East of west side	8.8	125.8	p5362	100%	Pass
		s	andcone Test			
	Test Number	Location	Percent Moisture	Dry Density (pcf)	Correlation within 5%	
	Lab # 5516 Same as al	oove	8.6	128.0	Yes	
est#	Location	Percent Moisture	Dry Density (pcf)	Proctor Number	Percent Compaction	Pass/Fail
19	65' East of west side, 85' South of north end	8.5	119.0	p5362	96%	Pass
20	45' East of west side, 40' South of north end	9.1	120.9	p5362	98%	Pass

If you have any questions concerning this report, please call us at (208) 529-8242.

Respectfully submitted,

MATERIALS TESTING & INSPECTION INC.

Reviewed by: Lowell Trujillo

Rastern Idaho Regional Manager .ance Peterson

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1230 N. Skyline Drive, Ste. C. Idaho Falls, ID 83402 E-Mail eimti@srv.net

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	Lab Number:	5516	
Project No:	E99005c	Project:	INEEL/TRA
Date:	June 1, 1999	Inspector:	Dean Bird
Client:	Phenix	Contractor:	Phenix
Location:	35' south of north end, 65' east of west side	•	
	Hole Volume Calc	ulation:	
	Sand Jar ID =	A	
	Original Sand Weight =	11.75	
	Remaining Sand Weight =	4.50	
	Discharged Sand Weight =	6.71	
	Weight of Sand in Funnel =	2.80	
	Weight of Sand in Hole =	3.91	
	Volume of Hole (ft^3) =	0.049	
	Unit Weight of Sand (pcf) =	80.14	
	Hole Density Calc	ulation:	
	Pan ID ≠	Jesse	
	Tare =	0.80	
	Pan + Wet Soil =	7.61	
	Pan + Dry Soil =	7.07	
	Mass of Moisture =	0.54	
	Percent Moisture =	8.6	
	Weight of Dry Soil =	6.27	
	Density of Removed Soil =	128.0	
	Moisture-Density Gauge/Sand	l Cone Correlat	tion:
	in Place Nuclear Density =	125.8	
	In Place Nuclear Moisture =	8.5	
	Sand Cone Density ≂	128.0	
	Sand Cone Moisture =	8.6	
Remarks	Correlates with in place density test no. 18.		

	Lab Number:	5518	
Project No:	E99005c	Project: _	INEEL/TRA
Date:	June 1, 1999	Inspector:	Dean Bird
Client:	Phenix	Contractor: _	Phenix
Location:	45' north of south side, 75' west of east side	e	
	Hole Volume Cald	culation:	
	Sand Jar ID =	<u>c</u>	
	Original Sand Weight =	11.74	
	Remaining Sand Weight =	5.06	
	Discharged Sand Weight =	6.68	
	Weight of Sand in Funnel =	2.80	
	Weight of Sand in Hole =	3.88	
	Volume of Hole (ft^3) =	0.048	
	Unit Weight of Sand (pcf) =	80.14	
	Hole Density Cald		
		Brook	
	Tare =	0.82	
	Pan + Wet Soil =	7.18	
	Pan + Dry Soil ■		
	Mass of Moisture =	0.54	
	Percent Moisture =	9.3	
	Weight of Dry Soil =	5.82	
	Density of Removed Soil =	121.3	
	Moisture-Density Gauge/Sand	d Cone Correla	ation:
	In Place Nuclear Density =	117.5	
	In Place Nuclear Moisture =	8.9	
	Sand Cone Density =	121.3	
	Sand Cone Moisture =	9.3	
Remarks:	Correlates with in place density test no. 10		
		, , , , , , , , , , , , , , , , , , ,	



Environmental Services

☐ Geotechnical Engineering

Construction Materials Testing

Special Inspecti

Lance Peterson
Phenix Construction
P. O. Box 1626
Idaho Falls, ID 83403

Project: INEEL TRA Inspector: Dean Bird

Inspection Date: June 2, 1999

Note: All tests were taken at Cell 57 at 4" depth, -4' level

MOISTURE DENSITY TEST REPORT

As requested MTI performed on-site density testing in accordance with current applicable standards. The results obtained were as

follows: Test #	Location	Percent Moisture	Dry Density (pcf)	Proctor Number	Percent Compaction	Pass/Fail
1	50' South of north end, 30' West of east end	9.1	124.1	p5362	100%	Pass
2	50' South of north end, 40' West of east side	10.0	120.3	p5362	97%	Pass
3	50' South of north end, 50' West of east side	8.6	118.7	p5362	96%	Pass
4	50' South of north end, 60' West of east side	10.3	121.5	p5362	98%	Pass
5	50' South of north end, 40' East of west side	9.7	119.0	p5362	98%	Pass
6	50' South of north end, 40' East of west side	10.0	121.3	p5362	98%	Pass
7	50' South of north end, 30' East of west side	8.8	125.8	p5362	101%	Pass
		S	andcone Test			
	Test Number	Location	Percent Moisture	Dry Density (pef)	Correlation within 5%	
	Lab # 5519 Same a:	s above	10.1	124.4	Yes	
Test #	Location	Percent Moisture	Dry Density (pcf)	Proctor Number	Percent Compaction	Pass/Fail
8	50' South of north end, 20' East of west side	7.7	118.6	p5362	96%	Pass

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	<u> </u>					
`est#	Location	Percent Moisture	Dry Density (pcf)	Proctor Number	Percent Compaction	Pass/Fail
9	50' South of north end, 10'East of west side	7.9	117.0	p5362	95%	Pass
10	75' South of north end, 25' East of west side	9.7	119.3	p5362	97%	Pass
11	75' south of north side, 35' East of west side	8.6	118.9	p5362	96%	Pass
12	75' South of north side, 45' East of west side	6.9	119.2	p5362	96%	Pass
13	75' South of north side, 55' East of west side	7.9	118.8	p5362	96%	Pass
14	75' South of north side, 50' West of east side	7.3	120.4	p5362	97%	Pass
15	100' North of south side, 45' West of east side	6.1	117.8	p5362	95%	Pass
		Sa	andcone Test			
	Test Number	Location	Percent Moisture	Dry Density (pcf)	Correlation within 5%	
	Lab # 5520 Same as	above	6.8	118.3	Yes	
est #	Location	Percent Moisture	Dry Density (pcf)	Proctor Number	Percent Compaction	Pass/Fail
16	100' North of south side, 35' West of east side	9.8	120.4	p5362	97%	Pass
17	100' North of south side, 25' West of east side	8.3	119.0	p5362	96%	Pass
18	85' North of south side, 35' East of west side	8.6	119.5	p5362	97%	Pass
19	65' North of south side, 45' East of west side	8.9	118.6	p5362	96%	Pass
20	50' North of south side, 56' East of west side	9.9	119.0	p5362	96%	Pass



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Environ	mental Services Q Geote	chnical Engineering	□ Constr	uction Material	s Testing 🔘 S	pecial Inspect
Test#	Location	Percent Moisture	Dry Density (pcf)	Proctor Number	Percent Compaction	Pass/Fail
21	50' North of south side, 25' East of west side	6.1	117.8	p5362	95%	Pass
		Sai	ndcone Test			
	Test Number	Location	Percent Moisture	Dry Density (pcf)	Correlation within 5%	
	Lab # 5521 Same a	s above	7.0	116.3	Yes	
	Required Compaction of densit	ties: 95%	Proctor #	p 53 62: 123.6	pcf @ 9.4% moi	sture

If you have any questions concerning this report, please call us at (208) 529-8242.

Respectfully submitted,

MATERIALS TESTING & INSPECTION INC.

Reviewed by: Lowell Trujillo Eastern Idaho Regional Manager

cc: Lance Peterson

LT/klp

	Lab Number:	5519	
Project No	: <u>E99005</u> c	Project:	INEEL/TRA
Date	June 2, 1999	Inspector:	Dean Bird
Client	: Phenix	Contractor:	Phenix
Location	: 50' south of north end, 30' east of west sid	е	
	Hole Volume Cal	culation:	
	Sand Jar ID =	Α	
	Original Sand Weight =	11.89	
	Remaining Sand Weight =	5.12	
	Discharged Sand Weight =	6.77	
	Weight of Sand in Funnel =	2.80	
	Weight of Sand in Hole =	3.97	
	Volume of Hole (ft^3) =	0.050	
	Unit Weight of Sand (pcf) =	80.14	
	Hole Density Cald		
		Bethany	
		89.0	
	Pan + Wet Soil ≃	7.83	
	Pan + Dry Soil =	7.20	
	Mass of Moisture =	0.63	
	Percent Moisture =	10.1	
	Weight of Dry Soil =	6.22	
	Density of Removed Soil =	124.4	
	Majakum Damaiku Causa (Can	d C C	At
	Moisture-Density Gauge/San		IUON.
	In Place Nuclear Density =		
	In Place Nuclear Moisture ≃		
	Sand Cone Density =		
	Sand Cone Moisture	10.1	
_			
Remarks:	Correlates with in place density test no. 7.		

	Lab Number:	5520	
Project No:	E99005c	Project:	INEEL/TRA
Date:	June 2, 1999	inspector:	Dean Bird
Client:	Phenix	Contractor:	Phenix
Location:	100' north of south side, 45' west of east side	de.	
	Hole Volume Calc	culation:	
	Sand Jar ID ■	B	
	Original Sand Weight =	11.76	
	Remaining Sand Weight =	5.66	
	Discharged Sand Weight =	6.10	
	Weight of Sand in Funnel =	2.80	
	Weight of Sand in Hole =	3.30	
	Volume of Hole (ft^3) =	0.041	
	Unit Weight of Sand (pcf) =	80.14	
	Hole Density Calc	ulation:	
	Pan ID =	Maryin	
	Tare =	0.74	
	Pan + Wet Soil =	5.92	
	Pan + Dry Soil =	5.59	
	Mass of Moisture =	0.33	
	Percent Moisture =	6.8	
	Weight of Dry Soil =	4.85	
	Density of Removed Soil =	118.3	
	Moisture-Density Gauge/Sand	d Cone Correlati	on:
	In Place Nuclear Density =	117.8	
	In Place Nuclear Moisture =	6.1	
	Sand Cone Density =	118.3	
	Sand Cone Moisture =	6.8	
Remarks:	Correlates with in place density test no. 15.		
			

	Lab Number:	5521	
Project No:	E99005c	Project:	INEEL/TRA
Date:	June 2, 1999	Inspector:	Dean Bird
Client:	Phenix	Contractor:	Phenix
Location:	50' north of south side, 25' east of west side	e	
	Hole Volume Calc	ulation:	
	Sand Jar ID =	С	
	Original Sand Weight =	11.82	
	Remaining Sand Weight =	5.08	
	Discharged Sand Weight =	6.74	
	Weight of Sand in Funnel =	2.80	
	Weight of Sand in Hole =	3.94	
	Volume of Hole (ft^3) =	0.049	
	Unit Weight of Sand (pcf) =	80.14	
	Hole Density Calc	ulation:	
	Pan ID ≈	Мае	
	Tare =	0.74	
	Pan + Wet Soil =	6.84	
	Pan + Dry Soil =	ნ,44	
	Mass of Moisture =	0.40	
	Percent Moisture =	7.0	
	Weight of Dry Soil =	5.70	
	Density of Removed Soil =	116.3	
	Moisture-Density Gauge/Sand	d Cone Correla	tion:
	In Place Nuclear Density =	117.8	
	In Place Nuclear Moisture =	6.1	
	Sand Cone Density =	116.3	
	Sand Cone Moisture =	7.0	
Remarks;	Correlates with in place density test no. 21.		
		 	

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Environmental Services

Geotechnical Engineering

☐ Construction Materials Testing

☐ Special Inspecti

Phenix Construction
P. O. Box 1626
Idaho Falls, ID 83403

Project: INEEL TRA Inspector: Dean Bird

Inspection Date: June 3, 1999

Note: All tests were taken at Cell 57 at 4" depth, -3' below grade

MOISTURE DENSITY TEST REPORT

As requeste Test #	ed MTI performed on-site density tes Location		Dry Density (pcf)		The results obtained w Percent Compaction	vere as follows: Pass/Fail
I	60' North of south end, 35' West of east side	6.1	123.0	p5362	100%	Pass
2	60' North of south end, 45' West of east side	6.0	122.3	p5362	99%	Pass
3	60' North of south end, 55' West of east side	8.9	121.1	p5362	98%	Pass
4	60' North of south end, 65' West of east side	9.3	119.7	p5362	97%	Pass
5	60' North of south end, 35' East of west side	8.2	120.6	p5362	98%	Pass
6	75' North of south end, 35' East of west side	7.9	119.2	p5362	96%	Pass
7	75' North of south end, 45' East of west side	10.5	119.9	p5362	97%	Pass
8	75' North of south end, 55' East of west side	8.5	117.9	p5362	95%	Pass
9	75' North of south end, 55' East of west side	6.1	122.9	p5362	100%	Pass
		S	andcone Test			
	Test Number	Location	Percent Moisture	Dry Density (pcf)	Correlation within 5%	
	Lab # 5523 Same as a	ibove	7.4	119.1	Yes	
Test #	Location	Percent Moisture	Dry Density (pcf)	Proctor Number	Percent Compaction	Pass/Fail
10	40' South of north end, 40' East of west side	8.5	117.0	p5362	95%	Pass
Test #	Location	Percent Moisture	Dry Density (pcf)	Proctor Number	Percent Compaction	Pass/Fail



C:/99 1085/E99005c/soils/densities/0009.000

Enviro	nmental Services Geotechnic	cal Engineering	□ Cons	truction Materials	Testing 🔾	Special Inspections
11	40' South of north end, 50' East of west side	7.3	118.0	p5362	95% A	Pass
12	40' South of north end, 50' East of west side	8.1	119.5	p5362	95%	Pass
13	50' South of north end, 35' West of east side	7.7	119.0	p5362	96%	Pass
14	50' South of north end, 45' West of east side	8.8	119.3	p5362	97%	Pass
15	50' south of north end, 55' West of east side	7.8	117.6	p5362	95% G	Pass 18%
16	50' south of north end, 75' West of east side	8.5	120.8	p5362	(97%)	Pass
17	50' South of north end, 85' West of east side	9.6	121.4	p5362	98%	Pass
18	45' South of north end, 25' West of east side	7.4	123.5	p5362	100%	-

Sandcone Test

Test	Location	Percent	De
Number		Moisture	(j
Lab # 5524	Same as above	9.7	12

Test #	Location	Percent Moisture	Dry Density (pcf)	Proctor Number	Percent Compaction	rass/Fail
19	60' North of south end, 50' West of east side	8.2	119.1	p5362	96%	Pass
20	75' North of south end, 55' West of east side	8.9	121.4	p5362	98%	Pass

p5362: 123.6 pcf @ 9.4% moisture Required Compaction of densities: 95% Proctor #

If you have any questions concerning this report, please call us at (208) 529-8242.

Respectfully submitted,

MATERIALS TESTING & INSPECTION INC.

... Reviewed by: Lowell Trujillo

stern Idaho Regional Manager Lance Peterson

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208 529-8242

Fax 208 529-6911

	Lab Number:	5524	
Project No:	E99005c	Project:	INEEL/TRA
Date:	June 3, 1999	Inspector:	Dean Bird
Client:	Phenix	Contractor:	Phenix
Location:	45' south of north end, 25' west of east sid	е	
	Hole Volume Cal	culation:	
	Sand Jar ID =	B	
	Original Sand Weight =	11.70	
	Remaining Sand Weight =	4.19	
	Discharged Sand Weight =	7.51	
	Weight of Sand in Funnel ≈	2.80	
	Weight of Sand in Hole =	4.71	
	Volume of Hole (ft^3) =	0.059	
	Unit Weight of Sand (pcf) =	80.14	
	Hole Density Cal	culation:	
		Brook	
		0.80	
	Pan + Wet Soil =		
	Pan + Dry Soil =		
	Mass of Moisture =		
	Percent Moisture =		
	Weight of Dry Soil =		
	Density of Removed Soil =	123.9	
	_		
	Moisture-Density Gauge/San	d Cone Corre	ation:
	In Place Nuclear Density =	123.5	
	In Place Nuclear Moisture =	7.4	
	Sand Cone Density =	123.9	
	Sand Cone Moisture =	9.7	
Remarks:	Correlates with in place density test no. 18		
			- Andrew - A

Lab Number:	5523	
E99005c	Project: _	INEEL/TRA
June 3, 1999	Inspector: _	Dean Bird
Phenix	Contractor: _	Phenix
75' north of south end, 65' east of west side	е.	P-tr
Hole Volume Cal	culation:	
Sand Jar ID =	Α	
Original Sand Weight =	11.69	
Remaining Sand Weight =	4.63	
Discharged Sand Weight ≈	7.06	
Weight of Sand in Funnel =	2.80	
Weight of Sand in Hole =	4.26	
Volume of Hole (ft^3) =	0.053	
Unit Weight of Sand (pcf) =	80.14	
Hole Density Cald	culation:	
•		
		
J ,		
,		
Moisture-Density Gauge/San	d Cone Correla	ation:
In Place Nuclear Density =	122.9	
In Place Nuclear Moisture =	6.1	
Sand Cone Density =	119.1	
Sand Cone Moisture =	7.4	
Correlates with in place density test no. 9.		,
	E99005c June 3, 1999 Phenix 75' north of south end, 65' east of west side Hole Volume Calc Sand Jar ID = Original Sand Weight = Remaining Sand Weight = Discharged Sand Weight = Weight of Sand in Funnel = Volume of Hole (ft^3) = Unit Weight of Sand (pcf) = Hole Density Calc Pan ID = Tare = Pan + Wet Soil = Pan + Dry Soil = Pan + Dry Soil = Percent Moisture = Weight of Dry Soil = Density of Removed Soil = Moisture-Density Gauge/San In Place Nuclear Density = In Place Nuclear Moisture = Sand Cone Density = Sand Cone Moisture =	E99005c

Ξ ž 1 His His <u>}</u> 06-11-99 American American and many of Decome 11 73 ٤ 5 Submitted Onto Description 124) Signature SOIL AL AND DISPOSITION Subconfinctor PHEHIX OF IDAIO, 1 HC. Subconfinctor Code 99-02-100 ORIGINAL 1957 CELL 6-9-99 TEST REPORTS TYPE A 1957 CELL 6-10-99 TEST REPORTS TYPE A Proper TRA_RELIEDIAL_ACTION_OU_Z=L (20) I neknowladyo roenta of the chita buticated and Subscontractor Signatura [23] I | Additional Commonts Attached VEHDOR DATA TRADE 3 -(20) Subcontractor Signatura Or fig [72] Comments I'm Bestie and residuali. Work may proceed entitlest to learning after of converse noted. Amid 101 55555 × may proceed authors to lacorporation of any community nated Ť Signatura the sub-= 2 SVE PARSON'S ENGINEERING SCIENCE, INC. Zim S. vzozbinite AVE, P.O. nox 10251 Çıç. Fact = 4 4 f. I. Berden and resulted. Work may not proceased. Oktobutton Oay End for theirs not required. Work my proceed. VDS ftmm 3-04 3-04 lifetio falls, kinkin 03416-3954 CAM 110 _rao__ SUL ALLII Durinnest Control Mail Stop MS 3954 forwarday 3 Spec, Ast. 02200 (1.3.1)Ξ 02200 17.7 I Barrantes: Distribution tier lines 1.0 11C C. J. J. 0121914 Ē Ile caived ESAH i Ξ B-395

SEE IMBLUUCTIONS ON NEVERSE SIDE



VENDOR DATA REVIEW TRANSMITTAL SHEET

SUBMITTAL NO.: S-7304449.01-086 Rev.0 097	PROJECT NO.: OU 2-13 TRA Remedial Action	SUBCONTRACT NO.: S-7 Phenix of	· -
SUBMITTAL DESCRIPTION:			
LINE ITEN "E "C "E	" TEST REPORTS TYPE A SOIL " "	YPE A SOIL CELL 1957 6/9 CELL 1957 6/10/99	9/99
	EVIEW AND COMMENT REQUE	ST FORM	
	₩ ES&H	OTHER.	
XI CAM - CRAIG REESE	X CE - JODY LANDIS	OTHER -	
X QA - LEO HERBERT	OTHER - BILL OVERHOLT	OTHER -	
RECORD COMMENTS ON ATTACHED RE RECORD RECOMMENDED DISPOSITION IF COMMENTS ARE NOT RECEIVED OR NO CONT EVIDENCE THAT THE REVIEWER CONCURS WITH ENGINEER, EVEN IF NO COMMENTS ARE MADE. RETURN COMMENTS.	BELOW.	오르는 소리를 받는 것을 됐습니다.	
RESPONSIBLE ENGINEER: Craig Reese	AT: MS/3954_TSB	BY: JUNE 28, 1999	
	REVIEW COMMENTS AND DISP	OSITION	
LINE NUMBER	RECOMMENDED DISPOSITION	LINE NUMBER	RECOMMENDED DISPOSITION
A B	B		
		•	
REVIEWER: Willow Con holy	4		DATE: 6/28/99
MITTAL DOCUMENTS HAVE BEEN REVIEWED	APPROVAL AUTHORITY DISPO D, COMMENTS FROM OTHER REVIEWER	OSITION RS INCORPORATED OR RESOLVE	D, AND FINAL COMMENTS
Dies OSITION: A B	□ C □ D co	MMENTS: YES 🗆 NO	ATTACHED.
RESPONSIBLE ENGINEER:			DATE:

	DOCUMENT REVIEW RECORD
PARSONS	

Dr. Document
Design document
KVendor Data

Rev. O	Page: 1 of	COMMENT RESOLUTION						·	Date:	on response required. E - Editorial	
1-095	Pag)								nent: resolut	
: Submittel S-730444.01-097 Rev. 0	Review Date:	COMMENT	Location Magping Not	Compaction should be 96.2						n Reviewer. S - A suggestion to improve the document: resolution response required.	
- RD/RA Document Number/Title: Submittal		CODE	180							septance from iment.	
		PAGE NUMBER							/ Reviewer:	Codes: M - Significant comment requires resolution acceptance from Reviewer.	
		SECTION NUMBER							Comment Resolutions Accented By Reviewer:	ificant comment re	
Project: TRA -	Submittal No:	ITEM			R. 30°	7			Comment Recolu	Codes: M - Sign	

MATERIALS TESTING & INSPECTION, INC.

IN-PLACE NUCLEAR DENSITY TEST REPORT

FILE#:	99005 C	PROJECT:	INEELITRA
DATE:	6-9-99	INSPECTOR:	D. BIRD
CLIENT:	INGEL	CONTRACTOR:	PHENIX
PERMIT:		WEATHER:	MARM 550 CLEAR
Compaction 3	Required: 95% Soils: 5326	A snhalt:	Nuka Gause # 1

Test Number	Wet Density	Pounds Moisture	Percent Moisture	Dry Density	Maximum Density	Optimum Moisture	Percent Compaction
1.	127.7	9.0	7.0	118,7	123.6	7.4	76.0
Location:	10.0.0	0F5, 1	END 2	10'E.	به ترن	51D)=	
	AT GRA	40E 4	א בוק בוקן "	1 65	<u> </u>		
2.	126.7	7.0	5,5	119.7	123,6	9,4	96.8
Location:	101 n.	0,25, 13	ND 30'	15 01	W. 5	105-4	" DEPTH
The state of the s	ATGRAL	، قدر	CE LL	7	2 C		
<i>3.</i> /	128.0	7.9	6.1	120.)	123.6	9,4	97.1
Location:	10' N,	<u> </u>	END 40')= , U)	= W, S)	シニ サ	12257774
	A. GRA) 년. (-2-12-5)	7			
<u> </u>			-6,4				
	10-N. 0	デ-S	END 50	1. E. O)	- W. S	リロ上	תלבום ייני
· · · · · · · · · · · · · · · · · · ·	at bri		Cital - 5	7	\$ - .	i i i i i i i i i i i i i i i i i i i	
<u>5.</u>	127,6	9.5	7,4	178.1	1226	9,4	955
Location:	10' N,0	<u>تر ۶٫ تر </u>	NO 60	تره <u>. ت</u>ار `	W. 51	12F 4"	גודשונע
	AT GRA) D.E.	CE24-57	· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·		-
			1.6.4 7		123,6	9:4	97.4
The same	10 35,	OF 5.	どかりつく	VV.	OF E	5)DE	ないうにか
	ATEGRA		CETC . 2				
7	129.5	9.5	7,3	120.0	123,6	9,4	97.0
Location:	10' N.	6F 5.	END 20	3, N/ 0	F E . S	91127 <u>5</u> 2	111 1212 7 574
(2)\	AT GRA		F11 57	(5), 7 Adv. (2), (1), (2), (2)	1 ,		10
(b,)	125,1	824	6.5	到17.5	723.6	9,2/	195
Location:	10 N.F				F 14/ 51		产产品等
PANYCON	C AT (PAYE	Chit's	7.3.57	The second of th		S. B. C. C.
			7.5			9.4	7 7
Location:	10' N	05 9,	四八八八四	<u>30' W</u>	شر شرن را	1 5 1 DJ2	<u> </u>
-	y" DEPT	14:14T 0	10 250 A WE	CELL	57		· .

230 South Cole I Phone: (208) 376-

B-398

daho 83709 :08) 322-6515

Materials Testing & Inspection, Inc.

Location:

Location:

IN-PLACE NUCLEAR DENSITY TEST REPORT

FILE#:	E 99005 C	PROJECT:	INELL / TRA
DATE:	6-9-99	INSPECTOR:	D. BIRD
CLIENT:	INEEL	Contractor	PHENIX
PERMIT:		WEATHER:	COOL MICE 53-0
% Compaction	Required: 95% Soils: 532	Asphalt:	Nuke Gauge: #17
Test Number	Wet Pounds Percent Moisture Moisture	Dry Max Density Den	imum Optimum Percent Compaction
10	133,6 13,3 9,9	120,3 12:	3,6 9,4 97.3
Location:	100' 5, OF W. END 50	o` <u>に, の</u> に v	N. SIDE Y'DETTH
	AT GRADE CELL-ST		
12.	127.5 8.6 6.1	118,9 12.	3,6 9,4 96.1
Location:	90 5.01= N LEND 40	E. OF W.	SIDE サークミアガナ
	AF SPADE CELL-57		
13.	129.9 9.2 70	130.7 12.	3.6 9.4 97.6
Location:	90' 5. OF N. JEND 50'	العملا شارى . قط	, SIDE Y'DEPDH
	AT GRADE CLELLET		
/ ²).	128,7 6.3 4.8	122,4 12	3,6 9,4 99.0
Location:	80 5, OF N, END 10	1=, 01- v/	אדעינוני ני בעוצי
The Park	AT GRADE CELL-57		
15.	129,9 7,9 6.0	122.0 12.	3,6 9,4 98,7
Location:	85' c. 0= N 1= MD 60	E. OF W	1, SIDE Y" DEPTH
	-1' LEVEL CELL-ET		
16:22	127.6 10.71	117.5 = 012	3,6 9,4 95.0
Location:	85 STOFTN END	55' E, OF	N. SIDE YLDEPTH
	*) FIFVEL CELL-57		
17.	•	12	3,6 9,4

GRADE CILL-57 E, OF W SIDE 4" DEPTH

119.6

#17 TEST WAS NOT TAKEN TODAY



IN-PLACE **NUCLEAR DENSITY** TEST REPORT

INSPECTION, INC.

FILE#:	E. 99005 C	-	PROJECT:	INFEL / TRA
DATE:	6-10-99		INSPECTOR:	D. BIRD
CLIENT:	INEFL		CONTRACTOR:	PHENIX
PERMIT:			WEATHER:	WARM GO" CLIFAR
% Compaction	Required: 950	Soils: 5362	Asphait:	Nuke Gauge: T CAMU,

Test	Wet Pounds Percent Dry Maximum Optimum Percent Density Density Moisture Compaction
#)	127.1 8.2 6.4 118.9 123.6 9.4 96.1
Location:	120'S, OF N. BND 35'E OF W. SIDE 4" DEPTH
	-8"BELOW GRADE CELL-57
タスニー	1290 8,6 61616-120-1 123.6-19,4-197.4
Location:	1201-5-0F=NEND \$5 E=0FW. SIDE 4" DEPTH
	TRY CELL-57
H 3	128.5 8.9 6.9 = 119.6 123.6 9.4 96.7
Location:	120' WS, OF WEND 50' E, OF W. SIDE 4" DEPTH
> /.	-8" GRADIE CELL, 57
D 14 - 12	729.2 70.73 = 7,9 = 718.9 - 723,6 =9.7 = 96.
Location:	CON 15 OF W. SIDE GO E . OF W. SIDE 4" VEPTH
	-8"-G-RADE - CELL-57
<u>#5</u>	130,3 12,3 94 112.9 123,1- 9,4 95,4
Location:	100' 5, 0F N. SIDE 70'E. OF W. SIDE 4" DENTH
Secretary Construction	-8" BELOW GRADE
#6	797688733年至63年2119.3分月236年579
Location:	100 5 0 - 10 5 0 - 80 - 10 - W. 2519 5 - 7"
10	DELOVO GKADE
<u>ы 7</u>	126,2 9.0 6,3 118.2 123.6 9.4 95.6
Location:	1/6 'SOF N, SIDE 40 W. OF E. SIDELLI" DEPTH
Control of Control	-2 AELINU GRADE
# 8	到到了一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一
Location:	タル・アン・アン・アー・アングライン・アン・アン・アン・アン・アン・アン・アン・アン・アン・アン・アン・アン・アン
	PUEDECO GRADE
# 4)	127,8 9,25 7 2 118:5 123.6 9.5 195,9
Location:	100 WI OF S. END \$60 W. OF E. SIDE 4"
SANICONE	DEPTH 8" 175211 GRADE

96,2

230 South Cole R B-400 Idaho 83709 Phone: (208),376-4.

(208) 322-6515

MATERIALS TESTING & INSPECTION, INC.

IN-PLACE NUCLEAR DENSITY TEST REPORT

FILE#:	E99005 C		PROJECT:	INEFL / TRA
DATE:	6-10-99	· · · · · · · · · · · · · · · · · · ·	Inspector:	0, 8,20
CLIENT:	INEEL		CONTRACTOR:	PHEWIX
Permit:			Weather:	COOL L'S CLEAR
6 Compaction	Required: 959c	Soils: 5362	Asphait:	Nuke Gauge: CALL 17

HID 127.6 102 7.9 117.4 123.6 9.4 Location: 30'S OF WIEND 35'W, OF E. 51DE 4 -8" BELOW GRAPE CELL. 57 HI) 128.1 9.3 7.2 =118.8 123.6 9.4 Location: 30'-5 OF W. END 45 W, OF E 5)DL DEPTH -8" PELLW GRADE CELL-57 H)2 129.3 10.2 7.8 119.1 123.6 9.4	re. Compaction
-8" BELOW GRADE CELL. 57 HI) 128.1 9.3 7.2 118.8 1236 39.4 Location: 30' 5 0 - N. END 45 W. VF E 5101 DEPTH = 8" PELIW GRADE CELL 57	95,
-8" BELOW GRADE CELL. 57 HI) 128.1 9.3 7.2 118.8 1236 39.4 Location: 30' 5 0 - N. END 45 W. VF E 5101 DEPTH - 8" PELIW GRADE CELL 57	"DEPTH
Location: 30' SOFN. END 45 W, OF E SIDE DEPTH - 8" PELW GRADE CELL 57	
DEPTH - 8"- RELIW GRADE CELL 57	96.21
7 0 1911	24
1412 1193 102 78 119111236 84	
	94,3
Location: 30' 5 15 AL 500 50' WI, OF E 5100	= 711
MEDTU -18" PLEZON GRADE CELL-57	
出13 1725.2 6.2 14.9 19.0 1923.6 9.9	36.2
Location: 30-5, 0- NEWD 65 WIOF E. SIDE	471
DEPOHE-18" PELOW GRADIE CELL-57	
× 14 130,0 10.3 7.1 119.7 123.6 9.7	96,8
Location: 301 S. DE N. IENDO 75 W. OF 15. 51015	= 411
DEDTH - 18" POIELAW GRADE CELL-57	
475 176.64 7.76 - 26-02 -119.6- 1723.6- 9,4	96,2
Location: 30 5 0F N- FND 90 W- 0F 7 51DF 4	" リミアナナ
BELOW GRAVE CELEST	
H 16 129.9 18.3 6.3 121,6 123.6 9.4	98.3
Location: 30' 5, 05-AL EMP 100 W. OF E. 5110	= 1^2)/1
DEDTH-14" BELOW GRADE CELL-51	7.3
立当了至了了了。第一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个	義 第7月353
Location: 20 STOP NEW ENDER DE SIDE	沙里河沙里
-6' RELOW GRADE CEBEOT	
4)8 1299 10,2 7-2- 119,7 123,6 9.4	96,8
Location: - DAI CAF WI END IN 1= NF W, SID	7)= 411
17= VTX - 6" (FELL-17) B-401	

MATERIALS TESTING & INSPECTION, INC.

IN-PLACE NUCLEAR DENSITY TEST REPORT

FILE#:	E 9900	<u> 5 C</u>		_ PROJE	CT:	INGEL	ITRA
DATE:	6-10-			_ Inspec	CTOR:	17. BIRD	
CLIENT:	INE	EL.		_ Conti	RACTOR:	PHEMIX	
PERMIT:	<u> </u>	·• · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·	WEAT	HER:	MICE .	clian
% Compaction 1	Required:	95 70	Soils: <u>5-76</u>	<u> </u>	dr:	- Nuke Gau	ge: <u>Ct-41</u>
Test ,	Wet Density	Pounds Moisture	Percent Moisture	Dry Density	Maximu Densit	Optimum & Moisture	Percent Compaction
#19)	133,5	8.40	6.2	125.1	1231	5 9,4	100
Location:	16'5.0	م تنظر , لي المراتبر	ا معد ورد	ميل شر <u>ه . ت</u>	510	25470	4774
SAMRONC	Ar -21	BELOW		C=24 - 5	7		
H25=	729.9=	10,9	7.6	-119.0-	1236	-9,4	·96,2=
Location	1515	يرة للاسترح	ND 100	EOF	ŵ, "sı	DE AT 4"	אררפנט :
Section 2	Areal	BELOW	GRAVE	0:12	<u>-57 - </u>		
		<u> </u>	***************************************	! 			
Location:							
* = ' · · ·			The second contract of	Land the second			
		वितिहासिक्षिक वर्षे १९३० माल्या १८०					
Location:							
		110,59,35			isantita is raami Pista aas		
Location:							
	generalization of the marketing	rendone (n	Toler Sugar	مرتعاليف المستعارة	10 7 10 10 10 10 10 10 10 10 10 10 10 10 10	TOTAL SINGLES	ا المنافقة
Location:	The second secon						
William Control	Company of the Company						
				<u> </u>			
Location:							
The supplementary of the second second	- Company		The same of the confidence of the same of	and the second second	The state of the		
The state of the s	STREET, ST.						
TOWN TOWN							
Location:							
Location:							
Location:				<u> </u>			



VENDOR DATA REVIEW TRANSMITTAL SHEET

June 21, 199

SUBMITTAL NO.: S-7304449.01-09& Rev.0	PROJECT NO.: OU 2-13 TRA Remedial Action	SUBCONTRACT NO.: S-7 Phenix of	I
SUBMITTAL DESCRIPTION:			
"B" "C"	A" FINAL TEST REPORTS TYPE FINAL TEST REPORTS TYPE A S FIANL TEST REPORTS TYPE A S FINAL TEST REPORTS TYPE A S	SOIL CHEMICAL WASTE PO SOIL CHEMICAL WASTE PO	ND 5/19/99 ND 5/20/99
	REVIEW AND COMMENT REQUI	EST FORM	*
	X ES&H -	□ OTHER	
X CAM - CRAIG REESE	X CE - JODY LANDIS	□ OTHER -	
X QA - LEO HERBERT	OTHER - BILL OVERHOLT	OTHER -	
RECORD COMMENTS ON ATTACHED R RECORD RECOMMENDED DISPOSITION IF COMMENTS ARE NOT RECEIVED OR NO CON- EVIDENCE THAT THE REVIEWER CONCURS WITH ENGINEER, EVEN IF NO COMMENTS ARE MADE. RETURN COMMENTS	BELOW.		North Carlotte and
RESPONSIBLE ENGINEER: Craig Reese	AT: MS/3954 TSB	BY: JUNE 28, 1999	
	REVIEW COMMENTS AND DIS	POSITION	
LINE NUMBER	RECOMMENDED DISPOSITION	LINE NUMBER	RECOMMENDED DISPOSITION
A	<u>A</u> /3		
С	B		
D	В		
REVIEWER: //flien/ Carhot	14		DATE: 6/28/99
The state of the s			
SUPPLIED DOCUMENTS HAVE BEEN REVIEWS	APPROVAL AUTHORITY DISF D. COMMENTS FROM OTHER REVIEW	POSITION ERS INCORPORATED OR RESOLVE	D, AND FINAL COMMENTS
DISSITION: A B		OMMENTS: YES D NO	ATTACHED:
RESPONSIBLE ENGINEER:			DATE:

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Environmental Services

Geotechnical Engineering

☐ Construction Materials Testing

Special Inspections

Lance Peterson
Phenix Construction
P. O. Box 1626
Idaho Falls, ID 83403

Project: INEEL TRA Inspector: Dean Bird

Inspection Date: May 18, 1999

CORRECTED REPORT

MOISTURE DENSITY TEST REPORT

As requested MTI performed on-site density testing in accordance with current applicable standards. The results obtained were as follows:

Test #	Location	Percent Moisture	Dry Density (pcf)	Proctor Number	Percent Compaction	Pass/Fail
1	25' West of eastside, 25' North of southside of chem leech Pond	7.0	116.8	p5362	95%	Pass
2	105' West of eastside, 25' North of south end of chem leech pond	7.0	116.9	p5362	95%	Pass
3	25' East of westside, 25' North of south end of chem leech pond	6.5	121.2	p5362	98%	Pass
4	25' East of westside, 100' North of south end of chem leech pond	7.3	130.4	p5362	105%	Pass
5	100' East of westside, 100' North of south end of chem leech pond	6.9	126.5	p5362	102%	Pass
6	25' West of eastside, 100' North of south end of chem leech pond	7.4	125.0	p5362	101%	Pass
7	35' South of north end, 55' East of westside of chem leech pond	7.2	121,9	p5362	99%	Pass
8	35' West of eastside, 55' South of north end of chem leech pond	7.2	122.1	p5362	9 9%	Pass
9	20' South of north end, 100' East of westside of chem leech pond	7.5	122.0	p5362	99%	Pass



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Environ	mental Services Geote	chnical Engineering	C Const	truction Materia	ls Testing 🚨 Sr	pecial Inspecti
Test #	Location	Percent Moisture	Dry Density (pcf)	Proctor Number	Percent Compaction	Pass/Fail
10	35' West of eastside, 35' North of south end of chem leech pond	6.6	124.8	p53 6 2	100%	Pass
		San	dcone Test			
	Test Number	Location	Percent Moisture	Dry Density (pcf)	Correlation within 5%	
	North	Vest of eastside, 35° n of south end of leech pond	9.1	120.5	Yes	
Test #	Location	Percent Moisture	Dry Density (pcf)	Proctor Number	Percent Compaction	Pass/Fail
11	45' East of westside, 90' South of north end of chem leech pond	7.7	120.7	p5362	98%	Pass
12	45' South of north end, 100' West of east side of chem leech pond	8.1	119.0	p5362	96%	Pass
	Required Compaction: 95%		Proctor #	p 5362 : 123.6	pcf @ 9.4% mois	ture

If you have any questions concerning this report, please call us at (208) 529-8242.

Respectfully submitted,

MATERIALS TESTING & INSPECTION INC.

Reviewed by: Lowell Trujillo Eastern Idaho Regional Manager

cc: Lance Peterson

LT/kip

SAND CONE DENSITY DETERMINATION

	Lab Number: _	5400	
Project No:	E99005c	Project: _	INEEL/TRA
Date:	May 18, 1999	Inspector:	Dean Bird
Client:	Phenix	Contractor:	Phenix
Location:	35' north of south end of chem leech por	ıd.	
	Hole Volume Ca	ilculation:	
	Sand Jar ID = _	Α	
	Original Sand Weight = _	11.53	
	Remaining Sand Weight = _	3.49	
	Discharged Sand Weight = _	8.04	
	Weight of Sand in Funnel = _	2.80	
	Weight of Sand in Hole = _	5.24	
	Volume of Hole (ft^3) = _	0.065	
	Unit Weight of Sand (pcf) = _	80.14	
	Hole Density Ca	lculation:	
	Pan ID = _	Brook	
	Tare = _	0.81	
	Pan + Wet Soil =	9.35	
	Pan + Dry Soil = _	8.64	
	Mass of Moisture = _	0.71	
	Percent Moisture = _	9.1	
	Weight of Dry Soil = _	7.83	
	Density of Removed Soil = _	120.5	
	Moisture-Density Gauge/Sa	nd Cone Correl	ation:
	In Place Nuclear Density =	124.8	
	In Place Nuclear Moisture =_	6.6	
	Sand Cone Density = _	120.5	
	Sand Cone Moisture = _	9.1	
Remarks:	Correlates with in place density test no. 1	10.	
		-	

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T Environmental Services

☐ Geotechnical Engineering

□ Construction Materials Testing

☐ Special Inspectir

Phenix Construction
P. O. Box 1626
Idaho Falls, ID 83403

Project: INEEL TRA Inspector: Dean Bird

Inspection Date: May 19, 1999

CORRECTED REPORT

MOISTURE DENSITY TEST REPORT

As requested MTI performed on-site density testing in accordance with current applicable standards. The results obtained were as follows:

Test #	Location	Percent Moisture	Dry Density (pcf)	Proctor Number	Percent Compaction	Pass/Fail
1	35' North of south end, 35' West of west side of 6" depth	7.9	121.5	p5362	98%	Pass
2	35' North of south end, 75' East of west side of 4" depth	7.5	122.0	p5362	99%	Pass
3	35' North of south end, 40' West side of 4" depth	7.7	121.3	p5362	98%	Pass
4	100' North of south end, 35' East of west side of 4" depth	8.4	1 18 .5	p5362	96%	Pass
5	100' North of south end, 40' North of east side of 4" depth	7.7	119.0	p5362	96%	Pass
6	40' East of west side, 40' South of north end of 4" depth	7.6	122.5	p5362	99%	Pass
7	140' East of west side, 40' South of north end of 4" depth	7.7	121.4	p5362	98%	Pass
8	40' West of east side, 40' South of north end of 4" depth	8.1	121.5	p5362	98%	Pass
9	50' South of north end, 50' East of west side of 4" depth	8.2	122.0	p5362	99%	Pass
10	55' North of south end, 150' West of east side of 4" depth	7.4	124.3	p5362	99%	Pass

Sandcone Test

Test Number	Location	Percent Moisture	Dry Density (pcf)	Correlation within 5%
Lab # 5468	50' South of north end, 50' East of west side of 4" depth	9.7	115.3	Yes

1230 N. Skyline Drive, Ste. C, Idaho Falls, ID 83402

208 529-8242

Fax 208 529-6911

E-Mail eimti@srv.net

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S Environmental Services	☐ Geotechnical Engineering	☐ Construction Materials Testing	☐ Special Inspections
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Test #	Location	Percent Moisture	Dry Density (pcf)	Proctor Number	Percent Compaction	Pass/Fail
11	55' North of south end, 50' West of east side of 4" depth	7.0	120.0	p5362	97%	Pass
12	100' North of south end, 50' West of east side of 4" depth	7.3	117.9	p5362	95%	Pass
13	80' south of north end, 50' West of east side of 4" depth	7.7	120.0	p5362	95%	Pass
14	80' South of north end, 55' East of west side of 4" depth	6.2	119.0	p5362	96%	Pass
15	80' South of north end, 50' West of east side of 4" depth	7.6	122.8	p5362	99%	Pass
16	25' South of north end, 50' West of east end	6.9	119.9	p5362	97%	Pass
17	25' South of north end, 55' East of west side	7.9	119.0	p5362	96%	Pass
18	35' East of west side, 90' North of south end of chem leech pond	8.4	122.3	p5362	98%	Pass
19	90' North of south end, 45' West of east side of 4" depth	4.7	120.5	p5362	97%	Pass

Sandcone Test

Test Number	Location	Percent Moisture	Dry Density (pcf)	Correlation within 5%
Lab # 5469	90' North of south end, 45' West of east side of 4" depth	7.3	102.7	No Replace with #5471

Required Compaction of densities: 95%

Proctor #

p5362: 123.6 pcf @ 9.4% moisture

If you have any questions concerning this report, please call us at (208) 529-8242.

Respectfully submitted,

MATERIALS TESTING & INSPECTION INC.

Reviewed by: Lowell Trujillo Eastern Idaho Regional Manager

~Lance Peterson

Ιp

208 529-8242

Fax 208 529-6911

SAND CONE DENSITY DETERMINATION

	Lab Number:	5468	
Project No:	E99005c	Project:	INEEL/TRA
Date:	May 19, 1999	Inspector:	Dean Bird
Client;	Phenix	Contractor:	Phenix
Location: 50's	outh of north end, 50' east of west side	9	
	Hole Volume Cald	culation:	
	Sand Jar ID =		
	Original Sand Weight =		
	Remaining Sand Weight =		
	Discharged Sand Weight =		
	Weight of Sand in Funnel =		
	Weight of Sand in Hole =	4.60	
	Volume of Hole (ft^3) =	0.057	
	Unit Weight of Sand (pcf) =	80.14	
	Hole Density Calc	culation:	
	•	culation: Brook	
	Pan ID =		
	Pan ID =	Brook 0.81	
	Pan ID = Tare =	0.81 8.02	
	Pan ID = Tare = Pan + Wet Soil =	8.02 7.38	
	Pan ID = Tare = Pan + Wet Soil = Pan + Dry Soil =	8.02 7.38 0.64	
	Pan ID = Tare = Pan + Wet Soil = Pan + Dry Soil = Mass of Moisture =	8.02 7.38 0.64 9.7	
	Pan ID = Tare = Pan + Wet Soil = Pan + Dry Soil = Mass of Moisture = Percent Moisture =	8.02 7.38 0.64 9.7 6.57	
M	Pan ID = Tare = Pan + Wet Soil = Pan + Dry Soil = Mass of Moisture = Percent Moisture = Weight of Dry Soil =	8.02 7.38 0.64 9.7 6.57	on:
М	Pan ID = Tare = Pan + Wet Soil = Pan + Dry Soil = Mass of Moisture = Percent Moisture = Weight of Dry Soil = Density of Removed Soil =	8.02 7.38 0.64 9.7 6.57 115.3	on:
M	Pan ID = Tare = Pan + Wet Soil = Pan + Dry Soil = Mass of Moisture = Percent Moisture = Weight of Dry Soil = Density of Removed Soil = oisture-Density Gauge/Sand	9.7 6.57 115.3 d Cone Correlation	on:
M	Pan ID = Tare = Pan + Wet Soil = Pan + Dry Soil = Mass of Moisture = Percent Moisture = Weight of Dry Soil = Density of Removed Soil = oisture-Density Gauge/Sand In Place Nuclear Density =	8.02 7.38 0.64 9.7 6.57 115.3 d Cone Correlation	on:

SAND CONE DENSITY DETERMINATION

	Lab Number:	5469	
Project No:	E99005c	Project: _	INEEL/TRA
Date:	May 19, 1999	Inspector:_	Dean Bird
Client:	Phenix	Contractor: _	Phenix
Location:	90' north of south end, 45' west of east side	е	
	Hole Volume Cald	culation:	
	Sand Jar ID =	С	
	Original Sand Weight =	11,30	
	Remaining Sand Weight =	3.80	
	Discharged Sand Weight =	7.50	
	Weight of Sand in Funnel =	2.80	
	Weight of Sand in Hole =	4.70	
	Volume of Hole (ft^3) =	0.059	
	Unit Weight of Sand (pcf) =	80.14	
	Hole Density Cald	culation:	
	Pan ID =	Bethany	
	Tare =	0.98	
	Pan + Wet Soil =	7.48	
	Pan + Dry Soil =	7.04	
	Mass of Moisture =	0.44	
	Percent Moisture =	7.3	
	Weight of Dry Soil =	6.06	
	Density of Removed Soil =	102.7	
	Moisture-Density Gauge/Sand	d Cone Correla	ition:
	In Place Nuclear Density ≂	120.5	
	In Place Nuclear Moisture =	4.7	
	Sand Cone Density =	102.7	
	Sand Cone Moisture =	7.3	
Remarks:	Correlates with in place density test no. 19		
	alid due to excess vibration created by made		



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Environmental Services

Geotechnical Engineering
Construction Materials Testing
Special Inspecti

Lance Peterson
Phenix Construction
P. O. Box 1626
Idaho Falls, ID 83403

Project: INEEL TRA Inspector: Dean Bird

Inspection Date: May 20, 1999

CORRECTED REPORT

MOISTURE DENSITY TEST REPORT

As requested MTI performed on-site density testing in accordance with current applicable standards. The results obtained were as

foll	ows:

Test #	Location	Percent Moisture	Dry Density (pcf)	Proctor Number	Percent Compaction	Pass/Fail
1	51' North of south end, 75' East of west side, 4" depth of grade	9.0	122.8	p5362	99%	Pass

Sandcone Test

Test Number	Location	Percent Moisture	Dry Density (pcf)	Correlation within 5%
Lab # 5417	51' North of south end, 75' East of west side, 4" depth of grade	8.3	112.8	No Replace with Lab # 5472

Test#	Location	Percent Moisture	Dry Density (pcf)	Proctor Number	Percent Compaction	Pass/Fail
2	100' North of south end, 75' East of west side, 4" depth of grade	8.4	121.8	p5362	99%	Pass
3	50' South of north end, 80' East of west side, 4" depth of grade	8.8	123.2	p5362	100%	Pass
4	75' South of north end, 100' East of west side, 4" depth of grade	8.3	119.1	p5362	96%	Pass

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Fax 208 529-6911

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nviror	nmental Services Geotech	inical Engineering	□ Const	ruction Materials	Testing C Sp	ecial Inspections
Test #	Location	Percent Moisture	Dry Density (pcf)	Proctor Number	Percent Compaction	Pass/Fail
5	100' North of south end, 100' East of west side, 4" depth of grade	8.7	120.6	p5362	98%	Pass
6	75' North of south side, 50' West of east side, 4" depth of grade	7.4	119.3	p5362	. 97%	Pass
	Required Compaction of densitie	s: 95%	Proctor#	p5362: 123.6	pcf @ 9.4% moi:	sture

If you have any questions concerning this report, please call us at (208) 529-8242.

Respectfully submitted.

MATERIALS TESTING & INSPECTION INC.

Reviewed by: Lowell Trujillo Eastern Idaho Regional Manager

cc: Lance Peterson

LT/klp

SAND CONE DENSITY DETERMINATION

Danie of th	Lab Number:		
	E99005c	Project:	
	May 20, 1999		Dean Bird
Client:			Phenix
Location: 51' n	orth of south end, 75' east of west end		·
	Hala Valuma Cala	احماد	
	Hole Volume Calc		
	Sand Jar ID =		
	Original Sand Weight =		
	Remaining Sand Weight =		
	Discharged Sand Weight =		
	Weight of Sand in Funnel =	2.80	
	Weight of Sand in Hole =	4.64	
	Volume of Hole (ft^3) =	0.058	
	Linit Majorit of Sand (not) -	90.44	
	Unit Weight of Sand (pcf) =	OU. 14	
	Hole Density Calc	ulation:	
	Pan ID =	Brook	
	Tare =	0.80	
	Pan + Wet Soil =	7.88	
	Pan + Dry Soil =	7.34	
	Mass of Moisture =	0.54	
	Percent Moisture =	8.3	
	Weight of Dry Soil =	6.54	
	Density of Removed Soil =	112.8	
Me	oisture-Density Gauge/Sand	l Cone Correlatio	on:
M	oisture-Density Gauge/Sand		on:
M	In Place Nuclear Density =	122.8	on:
M	In Place Nuclear Density = In Place Nuclear Moisture =	122.8 9.0	on:
M	In Place Nuclear Density =	9.0 112.8	on:
M	In Place Nuclear Density = In Place Nuclear Moisture = Sand Cone Density =	9.0 112.8	on:
	In Place Nuclear Density = In Place Nuclear Moisture = Sand Cone Density =	122.8 9.0 112.8 8.3	

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Environmental Services

Geotechnical Engineering

☐ Construction Materials Testing

☐ Special Inspections

Lance Peterson
Phenix Construction
P. O. Box 1626
Idaho Falls, ID 83403

Project: INEEL TRA Inspector: Dean Bird

Inspection Date: May 24, 1999

MOISTURE DENSITY TEST REPORT

As requested MTI performed on-site density testing in accordance with current applicable standards. The results obtained were as

follows: Test #	Location	Percent Moisture	Dry Density (pcf)	Proctor Number	Percent Compaction	Pass/Fail
1	35' North of south end, 20' West of east side, 4" depth of final grade	7.3	119.1	p5362	97%	Pass

Sandcone Test

Test Number	Location	Percent Moisture	Dry Density (pcf)	Correlation within 5%
Lab # 5442	Same as above, no excavted material was lost from hole	6.5	117.9	Yess

Test#	Location	Percent Moisture	Dry Density (pcf)	Proctor Number	Percent Compaction	Pass/Fail
. 2	45' North of south end, 40' West of east side, 4" depth of final grade	7.6	120.0	p5362	97%	Pass
3	100' North of south end, 90' West of east side, 4" depth of final grade	7.4	119.3	p5362	97%	Pass
4	160' North of south end, 120' West of east side, 4" depth of final grade	6.6	121.4	p5362	98%	Pass
5	140' North of south side, 90' East of west side, 4" depth of final grade	8.6	118.0	p5362	95%	Pass



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Enviror	amental Services Geotec	hnical Engineering	☐ Cons	truction Materials	Testing 🔾	Special Inspectic
Test #	Location	Percent Moisture	Dry Density (pcf)	Proctor Number	Percent Compaction	Pass/Fail
6	35' North of south side, 90' East of west side, 4" depth of grade	7.1	120.0	p5362	97%	Pass
7	100' North of south side, 30' East of west side, 4" depth of grade	7.8	117.8	p\$362	95%	Pass
8	40' South of north end, 35' West of east side, 4" depth of grade	6.3	121.1	p5362	98%	Pass
9	30' South of north end, 35' East of west side, 4" depth of grade	7.9	117.7	p5362	95%	Pass
	Required Compaction of densiti	es: 95%	Proctor #	p5362: 123.6	pcf@ 9.4% n	noisture

If you have any questions concerning this report, please call us at (208) 529-8242.

Respectfully submitted,
MATERIALS TESTING & INSPECTION INC.

Reviewed by: Lowell Trujillo Eastern Idaho Regional Manager cc: Lance Peterson LT/klp

SAND CONE DENSITY DETERMINATION

	Lab Number:	5442	
Project No: _	E99005c	Project:	INEEL/TRA
Date:	May 24, 1999	Inspector:	Dean Bird
Client: _	Phenix	Contractor:	Phenix
Location: 3	5' north of south end, 20' west of east side	9,	
	Hole Volume Cald	culation:	
	Sand Jar ID =	A	
	Original Sand Weight =	11.28	
	Remaining Sand Weight =	3.62	
	Discharged Sand Weight =	7.66	
	Weight of Sand in Funnel =	2.80	
	Weight of Sand in Hole =	4.86	
	Volume of Hole (ft^3) =	0.061	
	Unit Weight of Sand (pcf) =	80.14	
	Hole Density Cald	culation:	
	Pan ID =	Bethany	
	Tare =	0.98	
	Pan + Wet Soil =	8.64	
	Pan + Dry Soil =	8.17	
	Mass of Moisture =	0.47	
	Percent Moisture =	6.5	
	Weight of Dry Soil =	7.19	
	Density of Removed Soil =	117.9	
	Moisture-Density Gauge/San	d Cone Correlati	ion:
	In Place Nuclear Density ■	119.1	
	In Place Nuclear Moisture =	7.3	
	Sand Cone Density =	117.9	
	Sand Cone Moisture ≖	6.5	
Remarks: C	orrelates with in place density test no. 1.		
			······



8

VENDOR DATA REVIEW TRANSMITTAL SHEET

			June 21, 199
SUBMITTAL NO.: S-7304449.01-099 Rev.0	PROJECT NO.: OU 2-13 TRA Remedial Action	SUBCONTRACT NO.: Phenix	S-7304449.01 of Idaho
SUBMITTAL DESCRIPTION:	<u> </u>		
LINE ITEM "E "C "E	" TEST REPORTS TYPE A SOIL " "	YPE A SOIL CELL 1957 - CELL 1957 6/8/99	6/7/99
R	EVIEW AND COMMENT REQUE	ST FORM	
	X ES&H -	OTHER -	
X CAM - CRAIG REESE	M CE - JODY LANDIS	OTHER -	
X QA - LEO HERBERT	OTHER - BILL OVERHOLT	OTHER-	
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RESPONSIBLE ENGINEER:			DATE:

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Design document
XVendor Date

DOCUMENT REVIEW RECORD

Project: 7.8	Project: TRA - RD/RA	Document	Number/Title	Document Number/Title: Quemittal S- 730 4449.01 - 0	099 Rev. O.
Submittal No:		Reviewer:		Review Date:	Page: 1 of
ITEM	SECTION	PAGE NUMBER	CODE	COMMENT	COMMENT RESOLUTION
				Test Location Map not included	
B-420					
Comment Rea	Comment Resolutions Accepted By Reviewer:	3y Reviewer:			Date:
Codes: M - S	Codes: M - Significant comment requires resolution acceptance comment if incorporated, would improve the document.	nificant comment requires resolution acceptant incorporated, would improve the document.		from Reviewer. S - A suggestion to improve the document: resolution response required.	nt: resolution response required. E - Editorial

MATERIALS TESTING &

FILE#: 79005C

CLIENT

IN-PLACE **NUCLEAR DENSITY** TEST REPORT

9:33 G-LOADS INSPECTION, INC.

PROJECT: INSPECTOR

CONTRACTOR PHENIX

WEATHER:

PERMIT: Nuka Gauss #17 .. 5712 . . QIN

% Compaction I	Required: 2	2.0	Soils: 2.26	<u>≰</u> Aspha	lt:	Nuke Gaug	ge: <u>#</u> /
	4 /	·	,		, g. 72		* .
Test *** Number *	Density	Pounds Moisture	Percent Moisture	Dry west	Maximum 3	Optimum 1. Moisture	Compaction
1.	127.2	8.1	6,3	119,1	123.6	9.4	96.0
Location:	F				W. 5)DI	ミャック	EPTH
	-2 \ JE	IEL !	CE11 - 5') AREA	\		
20	130:0	8.9	16.8=	學[2],[亞	123,6=	9,4	37.7.9 E
Location:					,=±w, 5	ינו שעו	DETTH
	-2 あた	ノにし、神人	EL1357	AA REA	A STATE OF THE PARTY OF THE PAR	- Parker of the Parker	POPULATION OF THE PROPERTY OF
3	126:1	7.6	· • •	118.5	123,6	<u> 9.4</u>	95.8
Location:	50 5.0	J= NU. 1	ENU 45	نره تر ا	M/ 511	DE 4" 1	DESTH
·	-2 15		E11-57		- ·		
2)	129:0	the remarks are extended to	or for the Profession for the Control of the Contro	ر الله الدين إن و 1 يهيو رئيسيون به المراجع المراجع المراجع المراجع المراجع المراجع المراجع المراجع المراجع ا	723;6	43.4	عباسهم فالراساء فالمحرجين وسيم
Location:	60 5	シールマン	WDE 75	を至った	SV5 511	7E 为增加	どアナル
	-2 注	沙 直、张	EL1-57	AREA	建新 参加。		
5 -	127.0	8.6	6.7	118.4	123,6	9.4	95.7
Location:	50'55, 0	-		•	1, 5) DE 7	אתקבוע"	-2'
	LEVEL	C1=11-	57 A 57	<u> </u>	Table		
	128,50	*3.25			#12376 A	*9.4	9//2#
Location:	30 : 5 * 6	FN:E	VD365	ETOF	W.751V)	= 4" 0	アノナ
PANDONUE	POPULE	IEL TOE	22*5 万ツ	YEAT			
7	128.0-	8.0	6,2	-120.0	123.6	9.4	97.0
Location:					W, SIDI	= 4" DE	<i>₹771</i>
	ーフ、 プミン	قرے ۲۰۰۰	11-57	AREA	The state of the state of		Tanana and an and
#2 min	12616	到安全	學漢字	119,3%	12376	45,3	276:5
Location	25. S. T.		- 10	WE WOO	机火港5和2	三颗小小	EPAHAD
	沙羅氏	7月27年8月	47.7	MAKEA			
9 -	129:9	10.2	7.8	1719.7	123.6	9.9	96.8
Location:	40'5.				= W, SIX	E 4"D	EPTH
	1-2, TE	IEL C	ミレン・エク	BAREA			

MATERIALS TESTING &

IN-PLACE **NUCLEAR DENSITY** TEST REPORT

INSPECTION, INC.

FILE#: £97005°	PROJECT:	INCELITRA
DATE: 6-8-99	INSPECTOR:	D, BIRD
CLIENT: TWEEL	CONTRACTOR:	PHENIX
Permit:	WEATHER:	CLOUDY GOOL
% Compaction Required: 25.2: Soils: 536.2	A sphalt:	Nuke Gauge: #7

Location: 80° 5. 0 = M. END 40° E. 0 = W. SIDE 4" DEPTH 123.6 9.4 96.3 128.2 9.25 71.2 188.95 123.6 9.4 96.2 128.2 9.25 71.2 188.95 123.6 9.4 96.2 128.2 9.25 71.2 188.95 123.6 9.4 96.2 128.2 9.25 7.6 119.1 123.6 9.4 98.3 129.0 9.9 7.6 119.1 123.6 9.4 98.3 129.0 9.9 7.6 119.1 123.6 9.4 99.0 120cation: 80° 5 0 = W. END 65° E. 0 = W. SIDE 4" DEPTH 130.9 8.2 6.7 123.7 123.6 9.4 99.0 120cation: 80° 5.0 = W. END 35° WEST 0 = E. SIDE 4" 123.0 11.9 8.9 121.1 123.6 9.4 97.9 123.0 12.0 8.3 6.5 19.3 123.6 9.4 97.9 124.6 8.3 6.5 19.3 123.6 9.4 97.5 127.6 8.3 6.5 19.3 123.6 9.4 97.6 127.6 8.3 6.5 19.3 123.6 9.4 97.6 127.6 8.3 6.5 19.3 123.6 9.4 97.6 127.6 8.3 6.5 19.3 123.6 9.4 97.6 127.6 8.3 6.5 19.3 123.6 9.4 97.6 127.6 8.3 6.5 123.6 9.4 97.1 120cation: 60° 5.0 = N. END 65° WEST 0 = E. SIDE 4" 127.6 8.3 120.1 123.6 9.4 97.1 120cation: 60° 5.0 = N. END 65° WEST 0 = E. SIDE 4" 127.7 120.5 123.6 9.4 97.1 120cation: 45° 5 9.25 7.1 120.5 123.6 9.4 97.4 120cation: 45° 5 9.25 7.1 120.5 123.6 9.4 97.4 120cation: 45° 5 9.25 7.1 120.5 123.6 9.4 97.4	Test	Wet	Pounds	Percent	Dry	Maximum	Optimum	Percent
Location: 80 St OF M EAID 40 E, OF W SIDE 4" DEPTH 10 C=11-57-7 L=VE 2	Number	Density	Moisture	Moisture	Density	Density	Moisture	Compaction
	<i>L</i>	130.3	11.2	8.3	119,1	123,6	9,4	76.3
128,2 9,25 71,2 188,95 123,6 9,4 96,2	Location:	80'51 0	OF ME	<u> </u>		W 510	3 4" DE	אנגאַ <u>ו</u>
Location: 80° 5. OF N. END 55° 15. OF W. SIDE 4" DEPTH 2 129.0 9.9 7.6 119.0 123.6 9.4 76.3 Location: 80° 5 OF N. END 65' 15. OF W. SIDE 4" DEPTH 2 130.9 8.2 6.7 122.7 123.6 9.4 99.0 Location: 80° 5. OF W. END 35' WEST OF E. SIDE 4" DEPTH DEPTH CELL 57 - 2' LEVIEL 8. 133.0 11.9 8.9 12.1 123.6 9.4 97.9 Location: 80° 5. OF N. END 75 WEST OF E. SIDE 4" DEPTH DEPTH CELL 57 - 2' LEVIEL 6. 127.6 8.3 6.5 119.3 123.6 9.4 97.9 Location: 80° 5. OF N. END 50° W. OF E. SIDE 4" DEPTH CELL 57 - 2' LEVIEL 7. 129.0 9.6 7.4 1/9.4 123.6 9.4 97.6 Location: 60° 5.01 N. END 50° W. OF E. SIDE 4" DEPTH CELL 57 - 2' LEVIEL 7. 129.0 9.6 7.4 1/9.4 123.6 9.4 97.6 Location: 60° 5.01 N. END 65' WEST OF E. SIDE 4" DEPTH CELL 57 - 2' LEVIEL 9. 130.3 10.2 7.8 120.1 123.6 9.4 97.1 Location: 40° 5 92.5 7.1 120.5 123.6 9.4 97.4 Location: 40° 5 92.5 7.1 120.5 123.6 9.4 97.4 Location: 46° 5 05 N. END 70 W. OF E. SIDE 4" DEPTH CELL 57 - 2 LEVIEL 9. 129.75 9.25 7.1 120.5 123.6 9.4 97.4 Location: 46° 5 05 N. END 70 W. OF E. SIDE 4" 157.7		IN CIEZ	<u> 2-57 -2</u>	レミソバ				
C=1) -57 -2 E=1 3	2	128.2	9.25	7.2	1 18.95	123.6	9,4	762
129.0 9.9 7.6 19.1 123.6 9.4 94.3	Location:	80:5.0	DF N. 151	VD 55	JE, OF	W. SIDE	4" DEP	7))
Location: 80 5 0 F N. END 65' F. CJ-W. 5)DE 4"DEPTH CELL 57 - 2' EVEL 130,9 8,2 6,7 123,7 123,6 9,4 99,0 Location: 80' 5,0 F W. END 35' WEST OF E, 5)DE 4" 5, 123,0 11,9 8,9 12,1 123,6 9,4 97,9 Location: 80' 5 0 F N. END 75 WEST OF E, 5)DE 4" DEPTH CELL 57 - 2' LEVEL Contion: 80' 5 0 F N. END 50' W. OF E, 5)DE 4" 7. 129,0 9,6 7,4 1/9,4 123,6 9,4 96,6 Location: 60' 5,0 F N. END 65' WEST OF E, 5)DE 5" DEPTH CELL 57 - 2' LEVEL 7. 129,0 9,6 7,4 1/9,4 123,6 9,4 96,6 Location: 60' 5,0 F N. END 65' WEST OF E, 5)DE 5" DEPTH CELL 57 - 2' LEVEL 9. 130,3 10,2 7,8 120,1 123,6 9,4 97,1 Location: 46' 5 0 F N. END 50' W. OF E, 5)DE 4" DEPTH CELL 57 - 2' LEVEL		<u> </u>	アー2	レミソニレ	· · · · · · · · · · · · · · · · · · ·	3.11		~
(130,9 8,2 6,7 123,6 9,4 99,0 Location: 80'5,0= w. End 35' west of E. 5,0= 4" 130,9 8,2 6,7 123,6 9,4 99,0	3	129.0	9.9	7.6	119,)	123.6	9,4	94.3
130,9 8,2 6,7 123,7 123,6 9,4 99.0	Location:	80'5 0	J-N. 1	=ND 65	' 1=, OJ=	W. 51D.	13 411 DE	= 2574
Location: 80' 5, 0 = W, END 35' WEST OF E, SIDE 4" DEPTH CELL-57-2' LEVEL. S. 133.0 11.9 8.9 121.1 123.6 9.4 97.9 Location: 80' 5 0 = W, END 15 WEST OF 1=, SIDE 4" DEPTH CELL-57-2' LEVEL. 6. 127.6 8.3 6.5 119.3 123.6 9.4 96.5 Location: 80' 5 0 = W. END 50' W, U = E, SIDE 9" 7. 129.0 9.6 7.4 119.4 123.6 9.4 96.6 Location: 60' 5.0 = W, END 65' WEST U = E, SIDE 4" DEPTH CELL-57 -2' LEVEL 8. 130.3 10.2 7.8 120.1 123.6 9.4 171.1 Location: 80' 5 0 = W, END 65' WEST U = E, SIDE 4" DEPTH CELL-57 -2' LEVEL 9. 129.75 9.25 7.1 120.5 123.6 9.4 97.4 Location: 46' 5. 0 = W, END 50' W, O = E, SIDE 4" DEPTH Location: 46' 5. 0 = W, END 50' W, O = E, SIDE 4" DEPTH Location: 46' 5. 0 = W, END 50' W, O = E, SIDE 4" DEPTH	<i>/</i> ·	CLE 22 . K	<u>7 - 2 ` 1</u>	EVEL				
DEPTH CELL-57-2' LEVIEL. 5. 133.0 11.9 8.9 121.1 123.6 9.4 97.9 Location: 80° 5. $6-1$ 1. $6-1$ 2. $6-1$ 3. $6-1$	<u>4</u>	130,9	8,2	6.7	122.7	123,6	9,4	990
5. 133.0 11.9 2.9 121.1 123.6 9.4 97.9 Location: 90° 5 0° 10 , $=100^{\circ}$ 15 10 , $=100^{\circ}$ 10 , $=1000^{\circ}$ 10 , $=10000^{\circ}$ 10 , $=10000^{\circ}$ 10 , $=1000000000000000000000000000$	Location:	80' 5:0	FW, E	ND 35	WEST	مير شره	511215	川道
Location: 90° S. of° N. END 45 $WESS$ of° $I=1$, S. $DI=1$, $I=1$,		112054	CELLE	57-2')	とというと、			4
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	5.	133.0	11.9	3,9	121.1	123.6	9,4	97.9
Coation: 80' 5. OF N. END' 50' W. OF E. SIDE 3" DEPTH CELL 57 -2' LEVEL 7. 129.0 9.6 7.4 1/9.4 123.6 9.4 96.6 Location: 60' 5. OF N. END 65' WEST OF E. SIDE 4" DEPTH CELL 57 -2' LEVEL 8. 130.3 10.2 7.8 120.1 123.6 9.4 197.1 Location: 20-5 0F N. END 70 W. OF E. SIDE 4" DEPTH CELL 57 - 2 LEVEL 9. 129.75 9.25 7.1 120.5 123.6 9.4 97.4 Location: 46' 5. NE N. END 50' W. OF E. SIDE 4" 1) EPTH	Location:	80'5 0	ر <u>ندر رربو شر</u> د	NO 45	WEST 0	<i>)= ,=,</i> S,	1 D)= 4) 5)
7. 129.0 9.6 7.4 1/9.4 123.6 9.4 96.6 Location: 60' 5.01= N.1=ND 65' WEST OF E, 51DE 4'' 8. 130.3 10.2 7.8 120.1 123.6 9.4 197.1 Location: 20.5 01=N. =ND 70 W. 01=E, 51DE 4'' DE 777 CELL - 57 - 2 1EVEL 9. 129.75 9.25 7.1 120.5 123.6 9.4 97.4 Location: 46' 5.01= N. END 50' W. 01= E, 51DE 4'' 1)=77.7	<u>-</u>	DEPTH	C/=22-	57- 2	LEVEL	<u>, , , , , , , , , , , , , , , , , , , </u>		-
7. 129.0 9.6 7.4 1/9.4 123.6 9.4 96.6 Location: 60' 5.01= N.1=ND 65' WEST OF E, 51DE 4'' 8. 130.3 10.2 7.8 120.1 123.6 9.4 197.1 Location: 20.5 01=N. =ND 70 W. 01=E, 51DE 4'' DE 777 CELL - 57 - 2 1EVEL 9. 129.75 9.25 7.1 120.5 123.6 9.4 97.4 Location: 46' 5.01= N. END 50' W. 01= E, 51DE 4'' 1)=77.7	6	ブスフ、し	8,3	6,5	-119,3	123,6	9,2	965
7. 129.0 9.6 7.4 1/9.4 123.6 9.4 96.6 Location: 60' 5.01 N, 15ND 65' WIEST OF 15, 51DE 41' DE 2774 CIELL-57 - 2' DEVIEL. 130.3 10.2 7.8 120.1 123.6 9.4 197.1 Location: 20-5-01 N, 15ND 70 W, 07-15, 61DE 41 197.1 PEYM CIELL-57 - 2 15V2 129.75 9.25 7.1 120.5 123.6 9.4 97.4 Location: 46' 5. 05 N, 15ND 50' W, 07-15, 51DE 41' 1)15777	Location:	80 5.	OF N.E	ND 50	W, D)	= <u>j=</u> , s)	カニ ラッ	, and designed on the section
Location: 60' 5, 01= N, 1=ND 65' WIEST UF IE, 51DE 41' DE 2774 CIELL-57 - 2' DEVIEL. 130,3 10,2 7.8 120,1 123,6 9.4 97.1 Location: 20-5=01=N, 1=ND 70 W, 07- E, 51DE 41' DE 7777 CIELL-57 - 2' LEVEL 129,75 9,25 7.1 120,5 123,6 9.4 97.4 Location: 46' 5, 05 N, EN' 50' W, 07- E, 51DE 41' 1) = 27.77	**************************************	カニャデナ	"C)=L1=	57 -2	シュミン	EL		
DE 7777 CELL-57 -2 DEVEL. 9.4 97.1 Location: 20-5-01-N; ENU 70 W, 07-E, 61DE 4" DE 7777 CELL-57 - 2 LEVEL 129.75 9.25 7.1 120.5 123.6 9.4 97.4 Location: 46' 5, 05 N, EN' 50' W, 07-E, 51DE 4" 1) 15777	7.	129.0	9.6	7.4	119.4	123.6	9,4	96,6
8, 130, 3 10, 2 7.8 120.1 123.6 9.4 197.1 Location: 201-5-01-N; END 70 W, 07-E, 61DE 4! DETTING CIELL-57 - 2 LEVEL 129.75 9.25 7.1 120.5 123.6 9.4 97.4 Location: 46' 5, 05 N, EN' 50' W, 07-E, 51DE 4'' 1) EPT.7	Location:	60 5.0.	1= N. 13	ND 65'	WEST	رية تزن	51DE 2) 1 1
Location: 20 5 0 No IEND 70 W. 07 E, 610E 4! 69 129.75 9.25 7.1 120.5 123.6 9.4 97.4 Location: 46' 5. 05 N. EN' 50' W. 07 E, 510E 4' 1) 5777		DEPTH	2 - 2 م تيري	57 -2	、 <u>) </u>	<u> </u>	-	97.1
DEYTH CIELL - 57 *- 2 LEVEL 9 129.75 9.25 7.1 120.5 123.6 9.4 97.4 Location: 46' 5, OF N, ENINGO'W, OF E, 5) DIE 4'' 1) EPT 17	8	130.3	10.2	7.8	-120.1	123.6	9.4	97.1
Location: $46'$ 5, $0=N$, $ENN SD'$ W , $0=E$, SDE $4''$ $DEPTA$	Location:	10-5	OF Wi	ENDZ	o with	هر تيز شره	SIDE 4	!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
Location: 45' 5, 05 N, END Sp' W, OF E, 5) DIE 4" 1) [PT/7]		DETTHY	CIELL	-57 %-	2 LEV	iel 🔭	25,544	TO THE STATE OF TH
	9)	129.75	9.25	7.1	120.5	123,6	9.4	97.4
	Location:	46' 5.	10 F N.	ENNY S	0' W. C.	ر ج ر بتار ت	DIE 411	1)1=7777
THOUSE CELL - 5/3 - 2 LL YEL	SWILLINE	へぼし -		- 2` LE	1.*		J. P	

INSPECTION, INC.

IN-PLACE **NUCLEAR DENSITY** TEST REPORT

FILE#: E99005C	PROJECT:	INFEL / TRA
DATE: 6-8-99	INSPECTOR:	D, 131 RD
CLIENT: INGSL	CONTRACTOR:	MIENIX
PERMIT:	WEATHER:	Cloury RAINY : windy
919 [2]		14 1 M

6 Compaction F	Required:	5%	Soils: 5.36 -	Aspha .	h:	Nuke Gau	ge: <u>#17</u>	
Test Number	- Wet -	Pounds / Moisture	- Percent Moisture	Dry Density	Maximum Density	Optimum Moisture	Percent Compaction	
10.	130.1	12.5	9.6	117.6	123.6	9.4	95.0	
Location:	40' N.	<u>قر , ی نیخره</u>	ND 40'	W. 0=	15, SID	E 4"02	ミンブト	
,	<u> ۶ - ۱۵ تیس</u>	7 - 2'	LEVEL			.: -	ت	
7/.	128,9	10.0	1.1	118.9	123,6	9.4	76,1	
Location:	HO NO	FS. El	ND . 710,	W. OF	上,510	E. 410	にアフサッ	İ
e many e p.	CELL- 5	7 -21	上巨人生		-			
12.	131,2	11,9	9,0	119.3	123.6	9,4	96.5	ľ
Location:	40° N. C	o)= 5, EA	117 50	W, 01=	15, SIDI	= 4" D)=	アトリ	
.بدر	<u> </u>	<i>7 -2</i> "	レビソドレ					
13.5	130,2)	9.3	7.1	121.1	123,6	9,4	91.8	
ocation:	40 1/	25 5. 1=	ND 60	W. 0.	ی بیل تیر	リレニーリハ	DEPTH	
	CELL 3	アーグ	しにング			خ		124,7
14.	129.0	12.0	9,3	117.0	123,6	4,2)	74.6	
Location:	50' N.	OF 5. EN	YD 50'	E, OF	W1 4)	ロフE り ^N	DEPTH	j
	CELL - 5	7 - 21	LEVEL		,		The same of the sa	
15.	1280-	1D.D.	=7-8	118.0	123.6	19.41	95,4	
ocation:	W W	or 5. 1	ミング	E = 0	F W 5	(رو ≤ادرار	DIEPTH	
	CELL-5	方上一次	ニンドン	烂上	မေးဗာ≟္ႏွီးကြီး ဗုဒ္ဓဂ္ဂ မ. က ဗာဗာဂ နာ ဂါမ	Turker sayan san san san Turker san san san san san Turker san san san san san san san san		
16.	128.9	9,9		119.0	123.6	9,4	362	
Location:	35 1/.	ير بي تسرن	三ND 3>	·) =, 0.	ک <i>دیری</i> تسد	リングニ 4)	シミアナナ	
,	- <u>4 1</u>	57 -	27) je v je	<u> </u>				
17	128.7	106	8.2	118.1	123.6	9,4	75.5	
ocation:	745/	卢罗 克勒定	ND 45	· E 62	W. \$5)	02-47	VE /TIPE	
	7222	数学の	LEVEL	لگهور به موجود به ده واکن در در در دارد در در د		The second secon		
18.	129.5	10.6	8.1	-118.9	123,6	9,4	96.1]
ocation:	35 N.		ENJIZ EG		= W, 5	101= 4"	יי נודא בות	
ANDTINE	CELL -		り上にい			·		

230 South Colè R Phone: (208) 376-4. B-423 daho 83709 :08) 322-6515

MATERIALS TESTING & INSPECTION, INC.

Location:

IN-PLACE NUCLEAR DENSITY TEST REPORT

FILE#:	E9900	95 C		_ PROJE	ст:	NIEL	1 JAA	
DATE:	6-8.99	7		_ INSPEC	TOR: 12	BIRD		
CLIENT:	INEEL	<u> </u>		CONT	RACTOR: P	HENIX		
PERMIT:	,			_ WEAT	HER: 💋	01 620	UDY. WI	زربىو
% Compaction	Required: 2	5%	Soils: 5.27	6 Aspha	_		ge: <u>ル</u> ノフ	
					· · · · · · · · · · · · · · · · · · ·			1
	Wet Density	Pounds Moisture	Percent Moisture	Dry Density	Maximum Density	Optimum (Moisture	Compaction	a.
19.	128.1	11.1	8.6	117.0	123,6	9,4	94.6	92
Location:	60'5.01	= N. EK	1D 60'	= 0/= 1	N. 51DE	4"DE) 774 1	
TOTAL TIPE SERVICE UT 1		7 -2						
20点	129.3	10.9	8.4	118.4	1236	9,4	95,7	
Location:	45 N.				N. SIDE	ין בינו ווע	7 H	
	CELE-	5クニコ	DEVEL		2.5	مدسطة مسهد العقيقية	And the second second	
		<u> </u>				<u></u>		
Location:								
over a graver of a seringanium	Trum independent of the party of the	mean own by 1,00 kg		·		1,550 ±		
Transport	who the state of the same						_	
Location	State of State Challenger and the	And the second s					44X, 4 +	
李二字的	Grand Special R	% - :			<u>,, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u>			
			!					
Location:								
***		12: 12: 12: 12: 12: 12: 12: 12: 12: 12:	<u>, </u>			;		
	建造			The second second	公司			
Location:		The state of the s	160	dfal f ja regalitik	TE BUT STORY		SEM A LONG FACE AND	
	A Property		Resignation a				AND THE REAL PROPERTY.	
					•			
Location:								
***		. =-]
	* # 16					der ton white		1

230 South Cole Residence Value 83709
Phone: (208) 376-4' B-424 08) 322-6515

1 2 x



VENDOR DATA REVIEW TRANSMITTAL SHEET

SUBMITTAL NO.: S-7304449.01-100 Rev.0	PROJECT NO.: OU 2-13 TRA Remedial Action	SUBCONTRACT NO.: S- Phenix of	
SUBMITTAL DESCRIPTION:			
•	3" C" O"	ECTION	
F	REVIEW AND COMMENT REQUE	ST FORM	
	₩ ES&H	OTHER-	
S CAM - CRAIG REESE	₩ CE - JODY LANDIS	□ OTHER -	
X QA - LEO HERBERT	OTHER - BILL OVERHOLT	OTHER -	
IF COMMENTS ARE NOT RECEIVED OR NO CONT EVIDENCE THAT THE REVIEWER CONCURS WITH ENGINEER, EVEN IF NO COMMENTS ARE MADE. RETURN COMMENTS RESPONSIBLE ENGINEER: Craig Reese	AND SUBMITTAL PACKAGE TO AT: MS/3954 TSB		
	REVIEW COMMENTS AND DISP	OSITION	
LINE NUMBER	RECOMMENDED DISPOSITION	LINE NUMBER	RECOMMENDED DISPOSITION
REVIEWER: William f. Gentra	H		DATE: 6/28/99
TAL DOCUMENTS HAVE BEEN REVIEWED	APPROVAL AUTHORITY DISPO COMMENTS FROM OTHER REVIEWER	OSITION RS INCORPORATED OR RESOLV	ED, AND FINAL COMMENTS
DIS-USITION: A B		MMENTS: YES 🗆 NO	
RESPONSIBLE ENGINEER:			DATE:

	PARSONS		DOCUMENT	r REVIEW RECORD	Design document (XVendor Data
Project: 7.84	TRA- ROYPE	Documen	Document Number/Title	1	00/-
Submittal No:	00/	Reviewer: ωUO	Ó	Review Date: 6/28	/99 Page: 1 of /
ITEM	SECTION NUMBER	PAGE NUMBER	CODE	COMMENT	COMMENT RESOLUTION
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ASTM C94 CONCRETE CYLINDER COMPRESSIVE STRENGTH

PAGE # 1 OF1

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Environmental Services

☐ Geotechnical Engineering

☐ Construction Materials Testing

Special Inspections

Lance Peterson
Phenix Construction
P. O. Box 1626
Idaho Falls, ID 83403

Project: INEEL TRA

Contractor: Phenix Construction Supplier: High Valley Concrete Mix ID: LOCATION:: Pipe in west backfill pit	Inspector: Dean Bird Truck #: 2 # Of Yards: 1	Ticket	t #:	
MIX PROPORTIONS:	TEST PROPERTIE	S & CO	NDITIONS:	
Cement :	1	Veather:	Clear	
Fly Ash:	Ambient Temp	регатиге:	37°F	
Water:	Concrete Temp. (ASTM (C 1064):	61°F	
Coarse Agg. #1:	Time I	Batched:	7:30 am	
	1			

Water:
Coarse Agg. #1:
Coarse Agg. #2:
Fine Agg. #1:
Fine Agg. #2:
Admix #1:
Admix #2:
Admix #3:
Water/Cement Ratio:

Time Batched: 7:30 am
Time Placed: 9:00 am
% Air Content (ASTM C 231 or C-173): 6.0%
Slump (inches) (ASTM C 143): 3 ½"
Unit Weight (ASTM C 138):
Yield (ASTM C 138):
Water Added (gais):

# of 0	Sylinders:	4									
	Cylinder		Соп.	Cylinder	Test	Test	Failure	Compressive	C-617	Fracture	
۵I	Diam.	Height	Factor	Area	Age	Date	Load	Strength	Cap	Туре	
5306	6	12	1.00	28.27	7	May 12, 99	100,850	3570		Shear	
5307	6	12	1.00	28.27	28	Jun 2, 99	164,500	5820		Shear	PASS
5308	6	12	1.00	28.27	28	Jun 2, 99	158,990	5620		Shear	PASS
5309	6	12	1.00	28.27	28	Jun 2, 99	169,160	5980		Shear	PASS
1											

ASTM C-617 is a sulfur cap -- neoprene pads used unless otherwise noted.

Remarks:

Respectfully submitted,

MATERIALS TESTING & INSPECTION INC.

Reviewed by: Lowell Trujillo Eastern Idaho Regional Manager

Louell Dayillo

Signed / stamped original document sent to Client and appropriate agency.

Lance Peterson

∄kip.

208 529-8242

Fax 208 529-6911



101

VENDOR DATA REVIEW TRANSMITTAL SHEET

		_	June 22, 1999
SUBMITTAL NO.: S-7304449.01-101 Rev.0	PROJECT NO.: OU 2-13 TRA Remedial Action	SUBCONTRACT NO.: S- Phenix of	
SUBMITTAL DESCRIPTION:			
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	X ES&H -	OTHER -	
X CAM - CRAIG REESE	☑ CE - JODY LANDIS	OTHER	
™ A - LEO HERBERT	OTHER - BILL OVERHOLT	OTHER .	
RECORD COMMENTS ON ATTACHED RECORD RECOMMENDED DISPOSITION	EVIEW RECORD FORM.		
 IF COMMENTS ARE NOT RECEIVED OR NO CONT	ACT MADE WITH THE RESPONSIBLE EN	GINEER BY THE REQUIRED RETU	IRN DATE, IT WILL BE
EVIDENCE THAT THE REVIEWER CONCURS WITH ENGINEER, EVEN IF NO COMMENTS ARE MADE.	I DOCUMENT IN REVIEW. THE ENTIRE I	PACKAGE MUST BE RETURNED	TO THE RESPONSIBLE
	AND SUBMITTAL PACKAGE TO		EER.
RESPONSIBLE ENGINEER: Craig Reese	AT: MS/3954 TSB	BY: JUNE 29, 1999	
	REVIEW COMMENTS AND DISP	OSITION	T
LINE NUMBER	RECOMMENDED DISPOSITION	LINE NUMBER	RECOMMENDED DISPOSITION
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REVIEWER: Will I Contact of	/		DATE: 6/29/99
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DISPOSITION: A B		MMENTS: YES 🗆 NO	
RESPONSIBLE ENGINEER:			DATE:
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ITEM	SECTION	PAGE NUMBER	CODE	COMMENT	COMMENT RESOLUTION
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VENDOR DATA REVIEW TRANSMITTAL SHEET

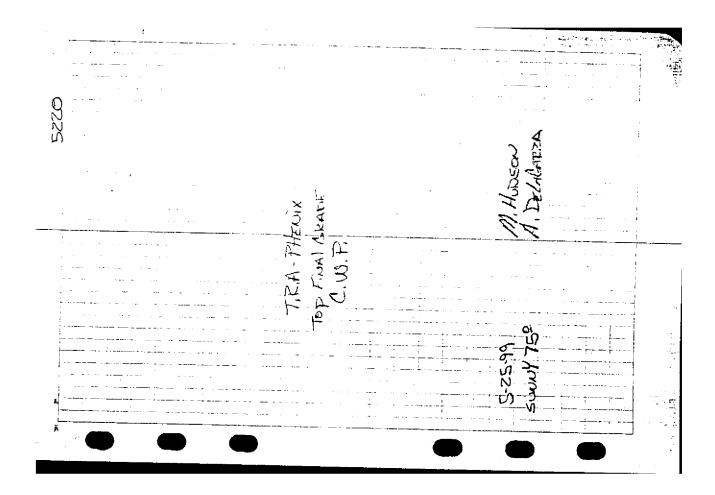
June 22, 1999

Rev.0	PROJECT NO.: OU 2-13 TRA Remedial Action	SUBCONTRACT NO.: S- Phenix of	
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LEO HERBERT RECORD COMMENTS ON ATTACHED RI RECORD RECOMMENDED DISPOSITION	OTHER - BILL OVERHOLT	OTHER.	
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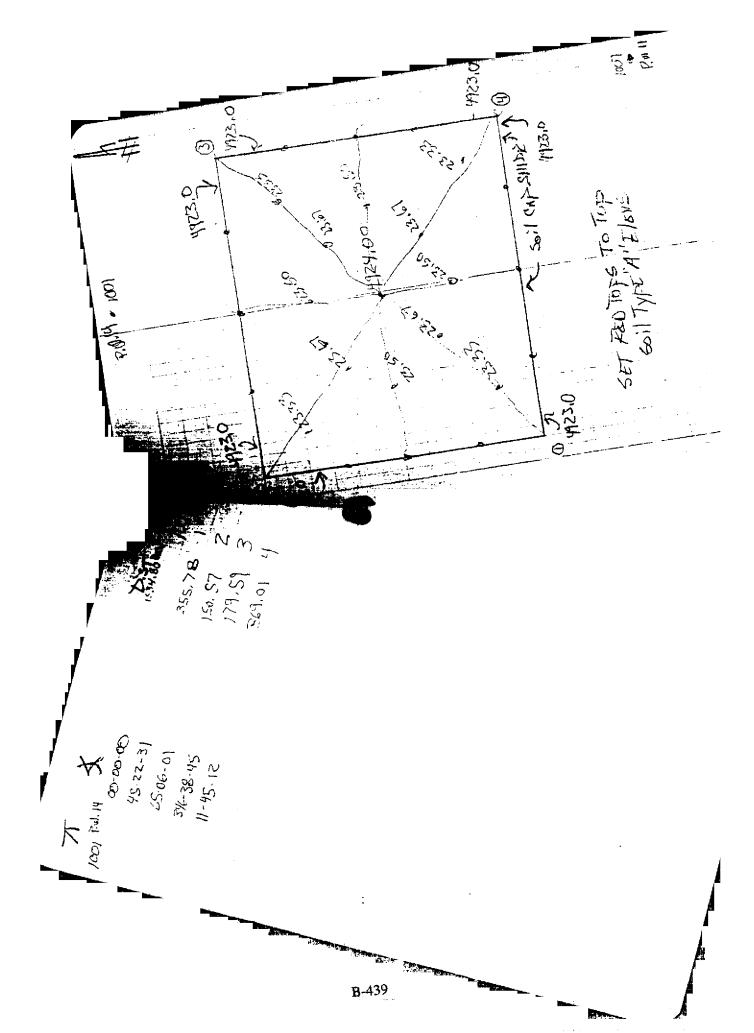
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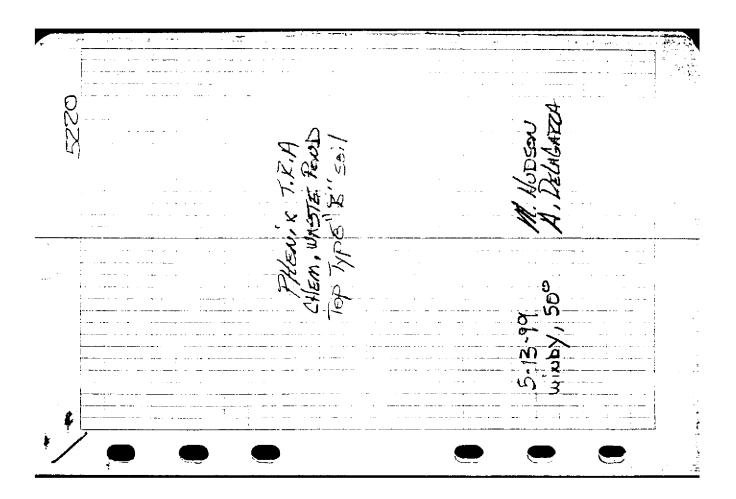
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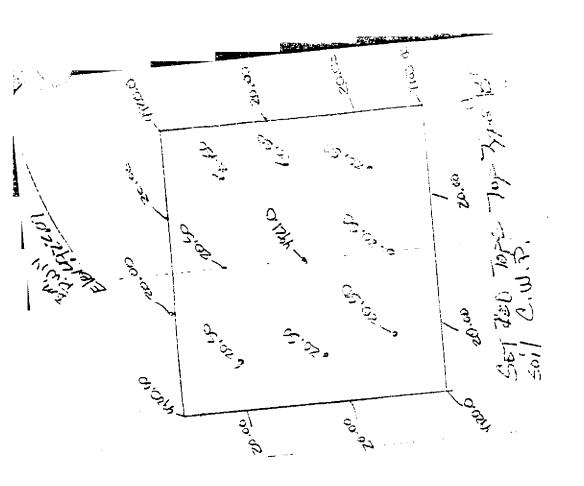


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VENDOR DATA REVIEW TRANSMITTAL SHEET

June 22, 1999

SUBMITTAL NO.: S-7304449.01-107 Rev.0	PROJECT NO.: OU 2-13 TRA Remedial Action	SUBCONTRACT NO.: Phenix	S-7304449.01 of Idaho
SUBMITTAL DESCRIPTION:			
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	REVIEW AND COMMENT REQU	JEST FORM	
	X ES&H -	☐ OTHER -	
X CAM - CRAIG REESE	X CE - JODY LANDIS	OTHER -	
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